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No. 5, Original.

IN THE SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1906.

Supreme Court, U. S.
FILED
APR 3 1906
JAMES H. MCKENNEY,
Clerk.

5 Orig.
T. 1907

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL,
JOHN C. HART,

Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (Limited),

Defendants.

IN EQUITY.

MOTION TO SET CAUSE FOR HEARING.

THE STATE OF GEORGIA,

BY

JOHN C. HART, Attorney-General of Georgia,

LEROY JOHNSON, Special Counsel,

ATLANTA, GEORGIA.

ATLANTA, GA.
The Franklin Printing and Publishing Company.
Geo. W. Harrison, Manager.
1906.

No. 13. Original.

In the Supreme Court of the United States.

October Term, 1905.

The State of Georgia, by Its Attorney-General, John C. Hart, *Plaintiff*, *vs.* The Tennessee Copper Company and the Ducktown Sulphur, Copper and Iron Company (Limited), *Defendants.*	In Equity.

Comes the complainant herein and respectfully represents unto the court:

On December 4th, 1905, stipulations were filed by all parties herein under which, at any time after January 15th, 1906, the return day of said cause, upon thirty days' notice in writing to all parties, the demurrers and rule to show cause therein might be called up for hearing.

On March 12th, 1906, complainant served the following notice upon the defendants, and each of them, herein, to-wit:

"Notice is hereby given as provided under the stipulations dated December 4th, 1905, of the intention of complainant to call said cause for argument after the expiration of thirty days from the date hereof, as may suit the convenience of the Court."

Complainant has heretofore notified defendants of its intention to move the Court to set said cause on Monday, April 16th, 1906, or as soon thereafter as may meet the approval of the

Court, and has delivered to them and each of them a copy of this motion.

Wherefore complainant moves the Court that said cause be set for hearing Monday, April 16th, 1906, or so soon thereafter as may suit the convenience of the Court.

THE STATE OF GEORGIA,
by JOHN C. HART,
Attorney-General of Georgia.

LIGON JOHNSON,
Special Counsel.

NO. 5 ORIGINAL. C. T. 190

In the Supreme Court of the United States.

Office Supreme Court
FILED
APR 23 190
JAMES H. MCKENNEY

OCTOBER TERM, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL,
JOHN C. HART,

Plaintiff,

vs.

No. 1 Orig.
O. T. 1907

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER & IRON COMPANY (LIMITED),

Defendants.

IN EQUITY.

BRIEF OF COMPLAINANT.

THE STATE OF GEORGIA,
BY
JOHN C. HART,
ATTORNEY-GENERAL OF GEORGIA,
LIGON JOHNSON,
SPECIAL COUNSEL,
ATLANTA, GEORGIA.

ATLANTA, GA.
The Franklin Printing and Publishing Co.
Geo. W. Harrison, Manager
1906

NO. 13. ORIGINAL.

In the Supreme Court of the United States

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} *In Equity.*

STATEMENT.

The controversy in the case at bar is occasioned by the generation and diffusion of sulphur dioxid, a highly destructive and poisonous gas, produced in the State of Tennessee by the copper smelting and roasting of the defendant companies. This sulphur dioxid is liberated as primarily generated, without condensation or otherwise disposing of the harmful fumes, and diffused over and precipitated upon Georgia territory in its original and natural state, resulting in great damage to the State of Georgia, her public domain, territory, real property and income and also to her citizens, their property and the enjoyment thereof, and to their health and constitutional rights; constituting both a public nuisance and a private wrong, which Georgia seeks to enjoin.

Sulphur dioxid within the Ducktown locality has been produced in quantities sufficient to injure Georgia and her citizens

but a comparatively short time. Up to the year 1900 the Ducktown Copper Company was generating so small an amount that its effects were barely, if at all, perceptible as far distant from the plant as the Georgia line. The Tennessee Copper Company began smelting in a small way the latter part of 1901, but it was not until the spring of 1902 that extensive operations were begun. The roasting plants, which produced the sulphur dioxid, were then some distance from the Georgia line, and not immediately adjoining it, as is now the case.

Complaint of the damage was first made by citizens to the Legislature of Georgia in the early part of 1903, in consequence of which a legislative committee was appointed to make a full investigation, and the Governor was authorized to take any and all steps necessary to prevent further injury, should the investigation disclose such to exist. The committee reported considerable damage already done by the fumes of the copper companies to Georgia, her citizens and property within the State.

This report was communicated by Georgia to the Governor of Tennessee, with the request that Tennessee abate such nuisance and prevent further injury to Georgia and her citizens by Tennessee, her citizens and denizens, which request Tennessee not only declined to grant but further declined to aid Georgia in the premises or to in any manner seek to remedy the injuries and evils reported to Tennessee.

Upon receipt of such refusal, the State of Georgia, after first notifying the copper companies to desist in the commission of said nuisance and damage, which said copper companies refused to do, filed its bill to the October term, 1903, of this Honorable Court, seeking the abatement of said nuisance and an injunction against the generation of the harmful gases produced by the defendant companies, or the liberation thereof, without said companies first converting or otherwise condensing or disposing of the sulphur dioxid before permitting the escape and diffusion of the fumes into the atmosphere.

At the time said first bill was filed it was represented by the

copper companies and believed by both the copper companies and the State of Georgia that the nuisance complained of was due to the mode of roasting ore then in use, the roasting being done in open and uncovered mounds or heaps several miles from the Georgia line. This mode the defendants proposed to forever abandon and thereby to eliminate the nuisance if the State of Georgia would dismiss her suit, which proposition was accepted and the suit dismissed.

Shortly thereafter the Tennessee Copper Company, the present chief offender by reason of its large production and the new location of its plant, removed its roasting plant from a point several miles within the interior of Tennessee to a location but a few hundred yards distant from the Georgia line and began roasting its ores through furnace smelters, producing and liberating gas in much stronger form and diffusing said gas directly upon Georgia soil without even the leavening influence of several miles of atmosphere formerly intervening under the location and operations as at the time the first bill was filed. In addition, the Tennessee Copper Company was and is engaged in more than doubling the capacity of the plant, which, if allowed to operate as enlarged, will more than double the production of sulphur dioxid first complained of.

The remaining defendant, the Ducktown Sulphur, Copper & Iron Company is still producing said fumes to about the same extent as when the first suit was filed.

The production of sulphur dioxid by both companies under the new process, its liberation in concentrated form, and the change of location of the Tennessee Company's roasting plant resulted in vastly increased injuries in Georgia, not only as to the amount of property injured, but also as to the scope of territory damaged and number of citizens affected.

In consequence of the continued and increased damage, instead of complete relief from the nuisance as was expected, renewed and continued complaints and appeals for aid were received by the Legislature from said locality, as well as general reports of injury by the officials of the State, and, by resolu-

tion approved August 15, 1905, a second committee of experts, including the State Chemist, Geologist and Commissioner of Agriculture, was provided for, said resolution directing an examination of the territory and the ascertainment of the damage if any occasioned by said fumes, and further directing the Attorney-General, in the event of injury by said fumes, to take all proper and necessary means to prevent further damage within the State.

This committee reported the injuries vastly increased over those found by the committee of 1903; that the amount and scope of territory damaged was rapidly multiplying and infinitely greater damage threatened than had already been accomplished, and recommended immediate legal steps by the State to secure relief from the baneful effects of the fumes.

The results of this investigation were communicated to the defendants, who were again notified to abate said nuisance and to cease liberating into the atmosphere the sulphur dioxid generated by them. This the defendants failed and refused to do, and thereupon the bill herein was filed.

The nuisance affects five hitherto exceedingly prosperous counties of the State of Georgia, whose chief occupations and industries were farming pursuits and lumberings. The fumes, as alleged by the bill, affect the country within a radius of fifty miles or more from the nearest point on the Georgia line, involving a territory considerably exceeding a thousand square miles in extent. Practically the whole of Fannin county is within this territory and, as shown by the last census, Fannin county alone has more than eleven thousand inhabitants.

The public nuisance arises through the free and unrestricted generation and liberation by the defendants of sulphur dioxid and poisonous, noxious, dense and unpleasant smoke, fumes and gases, which are precipitated within the State of Georgia, and which (a) deprive Georgia and her citizens of pure air and sunlight; (b) cause constant foul, noisome and unpleasant odors within the affected zone; (c) occasion the death and utter destruction of all crops, orchards, vegetables, forests and

vegetation, converting the region into a barren waste; (d) prevent the absorption of dew, rain and other water precipitated within said region necessary to supply the underground reservoirs, springs, streams and rivers furnishing water and power within the State of Georgia, the destruction of vegetation resulting in all water running off as rapidly as precipitated within said area; (e) further causing sudden and dangerous floods and freshets, which in addition to the damage and menace to life and safety, wash away all top or fertile soil, leaving only a subsoil of decomposing rocks incapable of sustaining plant-life; (f) destroy the fertility of the remote and outlying valleys not directly affected by said smoke and fumes by the deposits of decomposing rocks, mica and quartz washed thereon; (g) damage and render unsafe, unpleasant and unfit for travel and commerce the roads and highways within said territory; (h) injure the health of Georgia's citizens and inhabitants and menace the health of the State at large; (i) deprive her citizens and inhabitants within said locality of the peaceful and comfortable enjoyment of their homes and property, and (j) destroy their property, occupations and means of livelihood, making them liable to become charges upon the State.

The complainant bases its right to maintain suit, among others, upon the following grounds:

1. The nuisance complained of, being a public nuisance, can, under the laws of Georgia as well as the general or common law, only be abated at the instance of, by and in the name of the State of Georgia.

2. The maintenance of a public nuisance is a crime under the common law and also by direct statute of both Georgia and Tennessee. Jurisdiction of the crime, so far as the public nuisance in Georgia is concerned, is without the State of Tennessee and the offender is without the jurisdiction of Georgia, so that Georgia, other than with the aid of this Court, is powerless to preserve her sovereignty or to punish or prevent constantly recurring injurious and criminal acts committed within her territory and upon her soil and citizens.

3. The police power of the State includes all legislative or other acts and laws and things necessary not only for the preservation of the public safety and welfare, but also for the preservation of the safety, health, welfare and comfort and property of her citizens. In the exercise of this power the State of Georgia has passed an Act making it the duty of the Attorney-General to file this bill and seek the relief prayed. The police power can be legally exercised in this connection in no other manner than by the bill herein, and the suit is a necessary act in connection with the police power of the State and under the State's duties to the public thereunder.

4. Georgia, through her chief executive, has applied to Tennessee to prevent and abate a further commission of the acts complained of, which Tennessee has declined to do; and having exhausted diplomatic relations and friendly offices in that behalf, and being denied by the Constitution of the United States the right of invasion, aggressive operation, or other direct or further action, comes to this Court under the additional provisions of Art. IV, Sec. 4, of the Constitution, guaranteeing Georgia against invasion, hostile action or violence from other States or their citizens.

5. The action seeks to prevent not only the taking, in effect, of the property of Georgia's inhabitants without due process of law, but also the utter destruction of their occupations and means of livelihood and the consequent pauperization of a large number of Georgia's citizens, making them liable to become charges upon the State.

6. The suit is further filed under the general powers and rights of Georgia as *parens patriæ* and in the fulfilment of its constitutional obligations of complete and impartial protection to the person, his safety, health, comfort and right to pure air, light and sunshine and to the property and the comfortable enjoyment thereof of all its citizens and inhabitants, as well as under its guarantee to its taxpayers of protection in return for their tax payments therefor.

7. Complainant also sues as the owner in fee or custodian

of roads and public highways, the same having laid out and maintained at great expense, as well as the guardian and protector of intrastate commerce upon and afforded by said highways; the said roads being by defendants damaged and rendered unfit, unsafe and unpleasant for travel, passage or commerce.

8. Complainant asserts a further right of action as the original and ultimate owner and proprietor of all lands within its borders, including those upon which said waste is committed and damage done by defendants, and also,

9. By reason of loss of revenue and because of the trespass upon one of its sovereign attributes, through the interference with its taxing powers and by the reduction of taxable values, tax receipts and income, resulting from the injury and nuisance produced by the defendants.

The defendants have filed a general demurrer to the jurisdiction under nine specifications, alleging as follows:

1. There is no controversy between the State and the defendants.

2. The State has no interest in the controversy, the only parties at interest being the citizens of Georgia, which could afford the State no cause of action.

3. The State seeks to sue as *parens patriæ*, which it can not do.

4. The State is seeking to remedy the wrongs of her citizens which, regardless of the character of the wrongs or the conditions under which such wrongs were committed, the State has no right to do.

5. No property rights of the State are involved and the bill must fail.

6. That there is no real controversy between Georgia and the defendants.

7. The citizens injured might take their claims to Tennessee and sue at law, in consequence of which there is an adequate remedy at law.

8. No irreparable injury is shown and a full, adequate and complete relief may be had at law.

9. No cause of action is shown.

These grounds may be grouped under three general heads:

No cause of action is shown, Georgia not having sufficient interest to maintain the bill.

No property rights of the State are involved, without which the bill must fail.

Georgia and her citizens may seek damages in Tennessee and consequently have a full, adequate and complete relief at law.

In discussing the jurisdiction of this court counsel will take up the various grounds for the exercise of jurisdiction in the order asserted by complainant, rather than merely discussing the three phases of demurrer set up by defendants.

AUTHORITIES.

I.

Under no conceivable view is a public nuisance, merely as such, abatable or actionable at the direct instance of an individual. Where the public nuisance is at the same time working some special injury to the citizens, by reason of this special injury the individual may seek to abate same, but the right of action is with relation to the particular and private injury and not the public nuisance. The mere fact that subject-matter of the controversy is a public nuisance affords no right of action in the premises to any private person. Not only is this a general rule of law but it is also incorporated in the statute law of the State of Georgia, so that, should there have been no such general rule, citizens of Georgia, by reason of the statutes denying them right of action in the premises, would have been powerless, the right of redress in such matters being reserved solely to the State.

Section 4761 of the Code of Georgia of 1895 provides:

> "Private citizens can not generally interfere to have a public nuisance enjoined, but the petition must proceed for the public on information filed by the solicitor-general of the circuit."

Under section 3858 of the Code the restriction upon the powers of a citizen are again reiterated. The section is as follows:

> "Nuisances are either public or private. A public nuisance is one which damages all persons who come within the sphere of its operation, though it may vary in its effects on individuals. Generally, a public nuisance gives no right of action to any individual, but must be abated by a process instituted in the name of the State. A private nuisance gives a right of action to the person injured."

These sections are practically nothing more than the codification of the law as it existed. The general rule is stated in case of In re Debs, Petitioner, 158 U. S. 587, in which the Court declares:

> "A public nuisance has always been held subject to abatement at the instance of the government."

State decisions to the same effect are cited with approval in this case, among which are, Attorney-General *vs.* Tudor Ice Company, 104 Mass. 239; Attorney-General *vs.* Jamaica Pond Corporation, 133 Mass. 361. and State *vs.* Goodnight, 70 Tex. 682. On page 592 in the Debs case in reference to the exercise of jurisdiction in the case of a public nuisance, the court asserts:

> "Indeed it may be affirmed that in no well-considered case has the power of a court of equity to interfere by injunction in the case of public nuisance been denied, the only denial ever being that of a necessity for the exercise of that jurisdiction under the circumstances of the particular case."

To the same effect is the case of Mugler *vs.* Kansas, 123 U. S. 672-3, declaring:

> "In regard to public nuisances, Mr. Justice Story says: 'The jurisdiction of courts of equity seems to be of a very ancient date, and has been distinctly traced back to the reign of Queen Elizabeth. The jurisdiction is applicable not only to public nuisances, strictly so-called, but also to purprestures upon public rights and property. . . . . In case of public nuisances, properly so-called, an indictment lies to abate them and to punish the offender. But an information also lies in equity to redress the grievance by way of injunction.'

That the State is a proper party in such a proceeding on the special ground under this heading urged, and that the controversy as therein specified is judicable in this court, has been decided in terms in the recent case of Missouri *vs.* Illinois, 180 U. S. 241, in which the court states:

> "An inspection of the bill discloses that the nature of the injury complained of is such that an adequate remedy can only be found in this court at the suit of the State of Missouri. It is true that no question of boundary is involved nor of direct property rights belonging to the complainant State. But it must surely be conceded that if the health and comfort of

> the inhabitants of a State are threatened, the State is the proper party to represent and defend them."

The same rule applies to the United States Government, in matters within its direct protection and control, as to the States, with reference to the abatement of public nuisances. One of the earliest suits in this connection was the case of City of Georgetown *vs.* The Alexandria Canal Co., 13 Pet. 91, involving a public nuisance affecting a navigable stream, the Potomac river. In this case, the court holds:

> "A public nuisance being the subject of criminal jurisdiction, the ordinary and regular proceeding at law is by indictment or information by which the nuisance may be abated and the person who caused it may be punished. A court of equity may take jurisdiction in cases of public nuisance, by an information filed by the Attorney-General."

In the case of Coosaw Mining Company *vs.* South Carolina, 144 U. S. 565, the court declares:

> "It is now settled that a court of equity may take jurisdiction in cases of public nuisance by an information filed by the Attorney-General. . . . . In information and proceedings for the purpose of preventing public nuisances, the ordinary course is for the Attorney-General to take it on himself to sue as representing the public."

Commenting upon the English rule laid down in Attorney-General *vs.* Forbes ,2 My & Cr. 123, the court states:

> "In reply to the suggestion that an application to the high court of chancery to prevent a nuisance upon a public road was never heard of before, the Lord Chancellor said:
>
> " 'Many cases might have been produced in which the court has interfered to prevent nuisances to public harbors and public roads, and, in short, generally to prevent public nuisances.' "

The court further quotes with approval Attorney-General *vs.* Jamaica Pond Aqueduct Co., 133 Mass. 361, stating such case:

> "Was an information in equity in the name of the Attorney-General, to restrain a corporation from doing

> certain illegal acts, the necessary effect of which would be not only to impair the rights of the public in the use of one of the great ponds of Massachusetts for the purpose of fishing and boating, but to create a nuisance by lowering the pond and exposing upon its shores slime, and offensive vegetation detrimental to the public health. It was held upon the authority of numerous cases, American and English, that when the nuisance is a public one, an information by the Attorney-General was the appropriate remedy." . . . . "If a corporation or individual is found to be doing acts without right, the necessary effect of which is to destroy those rights and privileges, it furnishes a proper case for an information by the Attorney-General to restrain and prevent the mischief."

On pages 566-567 the court, in the Coosaw Mining Co. case, further declares:

> "The usual, and perhaps the more correct mode of proceeding in equity cases of public nuisance is by information at the suit of the Attorney-General." . . . "Mr. Justice Story said that an information in equity at the suit of the Attorney-General, would lie in cases of purpresture and public nuisance, the jurisdiction of courts of equity being sustained because of their ability to give a more complete and perfect remedy than is attainable at law, in order to prevent irreparable mischief and also to suppress oppressive and vexatious litigation."

For other authorities in point we desire to further cite:

Eden on Injunction, p. 267.
Story's Eq. Juris., Sec. 921.
Daniels' Chan. Pl. and Pr. (4th Ed.), p. 1636.
Penn *vs.* Wheeling Bridge Co., 13 How. 518.
Irwin *vs.* Dixon, 9 How. 27.
Phalen *vs.* Va., 8 How. 168.
Smith *vs.* Richter, 159 U. S. 398.
Attorney-General *vs.* Jamaica & C. Co., 133 Mass. 361.
Attorney-General *vs.* Forbes, 2 My. & Cr. 123.
Attorney-General *vs.* Tudor Ice Co., 104 Mass. 239.
State *vs.* Goodnight, 70 Tex. 682.

II.

In addition to the rights of action in the State generally to abate a public nuisance, there is in this connection an additional ground for the exercise of jurisdiction by the Court. Georgia appeals to the Court to protect her and her sovereignty and her enforcement of her laws within and with relation to the section and community injured.

The maintenance of a public nuisance is a crime by common law and by the statute law of both Tennessee and Georgia. The offender is in the State of Tennessee. The criminal act, so far as Georgia is concerned, is within the State of Georgia. Here, then, is the peculiar situation of crimes committed, being committed and threatened, in which the offender is without the jurisdiction and beyond the reach of the laws of Georgia, while the acts have been, and are being, committed and threatened in Georgia, making the offense without the jurisdiction of Tennessee, the domicile of the offender. In consequence, Georgia, without the aid of this Court, is not only unable to punish constantly recurring criminal and injurious acts within her territory and upon her soil and citizens, but is also unable to enforce her laws, civil or criminal, and to maintain her sovereignty within her dominion.

Every State possesses sole and exclusive jurisdiction over her own territory, not only with reference to her soil, but of acts committed thereon, as well as of the citizens and inhabitants thereof.

Mr. Justice Bradley, in Hoyt *vs.* Sprague, 103 U. S. 630, quoting with approval Story on Conflict of Laws, declares:

> "The first and most general maxim or proposition is that which has already been adverted to, that every nation possesses an exclusive sovereignty and jurisdiction within its own territory." And he adds: "The direct consequence of this rule is that the laws of every State affect and bind directly all property, whether real or personal, within its territory, and all

persons who are residents within it, whether natural born subjects or aliens, and also all contracts made and acts done within it."

"The second rule declares that no State or nation can, by its laws, directly affect or bind property out of its territory or persons not resident therein."

The foregoing so clearly and forcibly states the rule that additional authorities hardly seem necessary.

In Pennoyer *vs.* Neff, 95 U. S. 714, and in Wilson *vs.* Seligman, 144 U. S. 44, the rule is more tersely stated. In each of these it is said:

"Every State possesses exclusive jurisdiction and sovereignty over persons and property within its territory," and "no State can exercise direct jurisdiction or authority over persons or property without its territory."

The offense, the public nuisance, is committed in the State of Georgia and is a crime within the State.

"The law deems the crime committed in the place where the criminal act takes effect. Hence, in many circumstances one becomes liable to punishment in a particular jurisdiction, while his personal presence is elsewhere. Even in this way he may commit an offense against a State or country upon whose soil he never set foot."

Simpson *vs.* State, 92 Ga. 42. See also:
1 Bishop Crim. Proceed. 53.
Bishop Crim. Law, Sec. 110.
Com'rs *vs.* Macloon *et al.*, 101 Mass.
Rorer on International Law (2d Ed.), p. 323.
Minor Conflict of Laws, p. 499.

The only mode of suppression of nuisances originally was by indictment under common law. Blackstone, in reference to common or public nuisances, declares that same are

"Such inconvenient or troublesome offenses as annoy the whole community in general and not merely some particular person, and therefore are indictable only and not actionable; as it would be unreasonable to

multiply suits by giving each one a separate right of action for what damnifies him in common with the rest of his fellow subjects. Of this nature are (1) annoyances in highways, bridges and public rivers by rendering same inconvenient or dangerous to pass. . . . . All those kind of nuisances (such as offensive trades and manufactures) which, when injurious to the private man, are, when detrimental to the public, punishable by prosecution and subject to fine according to the quality of the misdemeanor, and particularly the keeping of hogs in any city or market town is indictable as a public nuisance." Black Com. B. 4, Ch. 13, 167.

This is likewise the law of Georgia. In the case of Justices *vs.* the Griffin & C. Road Co., 15 Ga. 61, the Court declares:

"This case is one simply of the obstruction of a public road. If a wrong at all, it is a case of common or public nuisance. It is the case of a crime, not of a private wrong (4 Black. Com. 167; 3 do. 218; do. 5-6). It is a case to be reached by indictment, not an action at law for damages. . . . .

"If a new gate be erected across the public highway, which is a common nuisance, any king's subject may cut it down or destroy it." (3 Black. 5-6). 'No action lies for a public or common nuisance, but an indictment only, because the damage being common to all the king's subjects, no one can assign his particular portion of it.' For this reason no person natural or corporate can have an action for a public nuisance, but only the king in his capacity of supreme governor and pater familias of the kingdom. Yet this rule admits of one exception, where a private person suffers some extraordinary damage, beyond the rest of the king's subjects; in which case he shall have private satisfaction by action. As if, by means of a ditch dug across a public highway, which is a common nuisance, a man or his horse suffer an injury by falling therein, then, for this particular damage, which is not common to others, the party shall have his action. (3 Black. Com. 219, 220)."

"The complainants do not show a case within the exception. From that law, then, do they get a right

> of action—to a bill—to damages—to an injunction? I know of none."

That nuisances are indictable is fully recognized by the Federal courts, as said in Mugler *vs.* Kansas, 123 U. S. 672:

> "In cases of public nuisances, properly so called, an indictment lies to abate them and to punish the offender. But an information, also, lies in equity to redress the grievance by way of injunction."

In the case of In Re Debs, 158 U. S., quoting from High on Injunction, the Court states:

> "Because the remedy by indictment is so efficacious, courts of equity entertain jurisdiction in such cases with great reluctance, whether their intervention is invoked at the instance of the Attorney-General or of a private individual who suffers some injury therefrom distinct from the public."

To the same effect is the case of City of Georgetown *vs.* Alexandria Co., 12 Pet. 97, which holds:

> "A public nuisance being the subject of criminal jurisdiction, the ordinary and regular proceeding at law is by indictment or information, by which the nuisance may be abated, and the person who caused it may be punished."

But there is no common law applicable to the United States as a whole. No indictment could be had in the Federal Courts under any public nuisance, even a nuisance upon the territory directly within the custody of the general government. As said in Penn. *vs.* Wheeling Bridge Co., 13 How. 564:

> "An indictment at common law could not be sustained in the Federal Courts by the United States against the bridge as a nuisance, as no such procedure has been authorized by Congress."

That Georgia alone would have jurisdiction of the offense is clear. That she has no jurisdiction of the offender is beyond peradventure. As to the nature and jurisdiction of crimes, Mr. Justice Gray, in Huntington *vs.* Altwell, 146 U. S. 669, states:

> "Crimes are in their nature local, and their jurisdiction is local. And so, as to the rights of real property, the subject being fixed and unmovable. . . . .

> Crimes and offenses against the laws of any State can only be defined, prosecuted and pardoned by the sovereign authorities of that State; and the authorities, legislative, executive or judicial of other States take no action with regard to them, except by way of extradition to surrender offenders to the State whose laws they have violated."

In the case of City of New York *vs.* Miln, 11 Pet. 138-137, it is declared:

> "No one will deny a State has the right to punish any individual found within its jurisdiction who shall have committed an offense within its jurisdiction, against its criminal laws. We speak not here of foreign ambassadors as to whom the doctrines of public law apply. We suppose it to be equally clear that a State has as much right to guard by anticipation against the commission of an offense against its laws, as to inflict punishment against the offender after it shall have been committed. The right to punish or to prevent crime, does in no degree depend upon the citizenship of the party who is obnoxious to the law. . . . . A State has undeniable and unlimited jurisdiction over all persons and things within its territorial limits as any foreign nation, when that jurisdiction is not surrendered or restrained by the Constitution of the United States. That by virtue of this, it is not only the right but the bounden duty of a State to advance the safety, happiness and prosperity of its people and to provide for its general welfare."

In reference to the preservation of the sovereignty of a State, this Court in U. S. *vs.* Texas, 143 U. S. 621, quoting Mr. Justice Washington in Fowler vs. Lindsay, 3 Dall. 411, declares:

> "I will not say that a State could sue at law for such an incorporal right as that of sovereignty and jurisdiction; but even if a court of law could not afford a remedy, I can see no reason why a remedy should not be obtained in a court of equity."

The offender in this case is a corporation. Its corpus is in Tennessee, but this, without the consent of Congress, could not

be surrendered to Georgia, even if Tennessee desired. Its chief officers are non-residents of Tennessee. In fact the defendant corporations are but denizens and Tennessee, if she chose to deliver to Georgia the parties in her jurisdiction, could surrender, not the controlling officers and directors, but merely the laborers and minor employees, the chief officials being residents of other States. And further, the offense being merely a misdemeanor is not such that Tennessee would recognize by extradition.

The State in its suit, as will be seen, is not seeking a mere injunction in equity against the commission of a crime. While the ultimate result sought would prevent criminal acts, the State appears here in a wholly different attitude from seeking to enjoin crime as such. It appeals to this Court to protect it in its sovereign attributes; to maintain the integrity of its sovereignty over its territory; to give effect the police powers belonging to it and to stay acts against its policy and its laws, acts committed from the soil of a sister State who harbors the offender and protects him not only in person and in property, but in the continuance of his acts.

In reference to the protection of the sovereignty and sovereign attributes of one State by another, Mr. Chief Justice Marshall, in the case of McCullough *vs.* Maryland, 4 Wheat. 431, very properly observes:

> "Would the people of one State trust those of another with a power to control the most insignificant operations of their State government? We know they would not. Why, then, should we suppose that the people of any one State should be willing to trust those of another with a power to control the operations of a government to which they have confided their most important and most valuable interests?"

In speaking of the fullness of the powers of a government, on page 424 it is further declared:

> "Its means are adequate to its ends; and on those means alone was it expected to rely for the accomplishment of its ends. To impose on it the necessity of resort-

> ing to means which it can not control, which another government may furnish or withhold, would render its course precarious, the result of its measures uncertain and create a dependence on other governments, which might disappoint its most important designs." (Quoted with approval in In re Debs, 158 U. S. 578.)

Unless such a cause as that of the State of Georgia may be maintained as a controversy judicable in this Court, how can the "means of the Federal Government" be said to be "adequate to its ends," and how may a State hope to maintain its sovereignty except through the mere tolerance of her sister States?

III.

The police power, the right and power of the State to protect the public safety, health and welfare, as well as the welfare, health, safety and comfort of each citizen, resides in the States and was never surrendered to the general government, and such right now rests in the State of Georgia, and was and is called into action by the resolution of the Legislature in the bill set forth, and under the facts as in the bill specified.

The highest and most binding duties of the sovereign are often enforcible only through the police power. So sacred are these duties of the States of the Union that, even where matters are generally confided to the Federal Government, or are otherwise within the Constitution inhibition, the police power applies. As stated in the case of Northwestern Fertilizer Co. *vs.* Hyde Park, 97 U. S. 659: "Perhaps the most striking illustration of the police power is in the destruction of buildings to prevent conflagration. This right existed by common law, and the owner was entitled to no compensation." Not only may property be taken without "due process of law," but contracts against the public safety, welfare, health or policy may be impaired or declared wholly void, and any other acts necessary to fulfil the duties of the State under its police power may be done without let or hindrance.

The police power can not be bartered or contracted away, and any legislative act, grant, charter or resolution towards this end is invalid. This is clearly set forth in the decision of Beer Co. *vs.* Mass., 97 U. S. 33, which holds:

> "Whatever difference of opinion may exist as to the extent and boundaries of the police power, and however difficult it may be to render a satisfactory definition of it, there seems to be no doubt that it does extend to the protection of the lives, health and prosperity of its citizens. The Legislature can not by any contract divest itself of the power to provide these objects."

The police power is most properly exercised for the purpose of abating a common or public nuisance, and the State in the exercise of such power need not even resort to legal proceedings to accomplish its ends.

In Holdon *vs.* Hardy, 169 U. S. 392, citing Davidson *vs.* New Orleans, 96 U. S. 97, and Nick *vs.* Hopkins, 118 U. S. 356, it is declared that the police power is reserved to the State to give them all possible power to protect their citizens and territory. It is said in this decision:

> "The police power can not be put forward as an excuse for oppression or unjust legislation; it may be lawfully resorted to for the purpose of preserving the public health, safety or morals or the abatement of public nuisances."

In Lawton *vs.* Steele, 152 U. S. 133, it is declared:

> "It (the police power) is universally conceded to include everything essential to the public safety, health and morals, and to justify the destruction or abatement, by summary proceeding, of whatever may be regarded as a public nuisance."

The Court in the case of New York *vs.* Miln, 11 Pet. 103, states:

> "In relation to these (internal police powers) the authority of the State is complete, unqualified and exclusive.
>
> "We are aware that it is at all times difficult to define any subject with proper precision and accuracy. . . . . We should say that every law came with-

> in this description which concerned the welfare of the whole people of a State, or any individual within it; whether it relate to their rights or their duties; whether it respected them as men or as citizens of the State; whether in their public or private relations; whether it relate to the rights or persons or of property of the whole people of the State, or of any individual within it; and whose operation was within the territorial limits of the State, upon persons and things within its jurisdiction. An example of the application of these principles is the right of the State to punish persons who commit offenses against its criminal laws within its territory."

If the defendants and their plants were in Georgia the State could proceed summarily to stop the nuisance. In the exercise of its sovereignty the State could even destroy the thing causing the nuisance and indict the offender in addition.

But, unfortunately, neither the defendants nor their plants are in Georgia or subject to the direct action of the police power of the State. The Legislature of the State has called into action all the police power the State possesses to suppress the nuisance. By reason of the most unusual conditions surrounding the nuisance this power can be legally exercised in no manner other than by the bill herein, a proceeding directly authorized and directed by the Legislature.

IV.

The Constitution of the United States guarantees protection to the State of Georgia against any invasion whatever, whether such invasion be by force of arms or other means, by another State or its citizens, or by a foreign government. It is sufficient that the means be hostile or harmful and be such that Georgia can not prevent or protect herself against without the use of force upon foreign territory.

In the case at bar Georgia has exhausted all amicable or other powers left in her by the Constitution. She has applied to Tennessee to prevent and abate the further commission of

the acts complained of, acts which, in their effect, are not only criminal in the State of Georgia, but which result in laying the territory of the State in waste more surely and completely than could be accomplished by any invading army bent upon its destruction. Tennessee has refused to restrain her citizens in the commission of such acts, declines to take any steps in the premises, and shields the defendants in the continuation of a most effective and harmful invasion.

Georgia has used every friendly office, has sought through every means open to her to protect her territory and her citizens. She is denied by the Constitution the right of invasion or other aggressive action, and under such denial is powerless in the premises without the aid of this honorable Court and the enforcement of the constitutional guarantee of protection through this Court, substituted in the place of the right of a State to take direct or hostile action in an endeavor to maintain her sovereignty and her rights and to preserve the life, health and comfort of her citizens. The following authorities are in point:

Constitution of the U. S., Art. IV, Sec. 4.
Federalist, LXXX.
Missouri *vs.* Illinois, 180 U. S. 208.
Debs, petitioner, 158 U. S. 564.
Rhode Island *vs.* Mass., 12 Pet. 657.
Hans *vs.* Louisiana, 134 U. S. 1.
Kansas *vs.* Colorado, 185 U. S. 125.

Possibly the fullest exposition of this doctrine is found in the case of Missouri *vs.* Illinois, 180 U. S. 241, in which the Court holds:

> "If Missouri were an independent and sovereign State all must admit that she could seek a remedy by negotiation, and, that failing, by force. Diplomatic powers and the right to make war having been surrendered to the general government, it was to be expected that upon the latter would be devoted the duty of

providing a remedy, and that remedy, we think, is found in the constitutional provisions we are considering."

In Rhode Island *vs.* Mass., supra, the necessity of the jurisdiction and helplessness of a State is clearly demonstrated in the declaration of Mr. Justice Baldwin:

"Bound hand and foot by the prohibitions of the Constitution, a complaining State can neither treat, agree nor fight with its adversary without the consent of Congress; a resort to the judicial power is the only means left for legally adjusting or persuading a State which has possession of disputed territory to enter into an agreement or compact relating to a controverted boundary. Few, if any, will be made, when it is left to the pleasure of the State in possession; but when it is known that some tribunal can decide on the right, it is most probable that controversies will be settled by compact."

The most recent expression of this Court upon this subject is to be found in the cases of Kansas *vs.* Colorado, 185 U. S. 125, wherein the Court, speaking through Mr. Chief Justice Fuller, declares:

"'War,' said Mr. Justice Johnson, 'is a suit prosecuted by the sword.' Harcourt *vs.* Dillard, 12 Wheat. 523. . . . . 'The publicist suggests as just causes of war, defense, recovery of one's own and punishment of an enemy.' . . . . "But when one of our States complains of the infliction of such a wrong or the deprivation of such rights by another State, how shall the existence of such cause of complaint be ascertained and be accommodated if well founded? The States of the United States can not make war on each other. They can not grant letters of marque and reprisal. They can not make reprisals of each other by embargo. They can not enter upon diplomatic relations and make treaties." The Court then held that the only remedy was under a bill filed in this Court.

Not only is the State denied the right to exercise police power for the suppression of a public nuisance, but the citizens

are denied the right under common law to destroy a public nuisance if it could be done without riotous acts. To exercise and retain her full sovereignty over her properly and protect her citizens and territory, other than by a bill in this Court, Georgia and her citizens would have to violate the provisions of the Constitution they are seeking to invoke, and invade the territory of Tennessee.

In passing it may be remarked that, while Tennessee is not an actual party, the controversy is in effect a controversy between Georgia and Tennessee. All the nuisance complained of primarily arises in Tennessee, the corpus of the offenders is within that State, their representatives who produce the nuisance reside there, and the defendants are denizens of Tennessee, so that Tennessee is custodian of the res, which might be destroyed under the police power of Georgia were it within her territory and both sovereign to and protector of the personal representatives of defendants, who produce the nuisance; and Tennessee not only authorizes, but protects the continued commission of the acts compained of. She is not made a party, because full relief may be had directly against the offenders without the circumlocution necessary in a suit against Tennessee, resulting, if decided in favor of Georgia, in possibly still further proceedings, such as by forcing the withdrawal of the permit to do business and procedure thereunder, before abatement of the nuisance could be had. This does not, however, change the character of the litigation.

Tennessee did not even require the formal notice of the State of Georgia to make it her duty to abate the destruction being wrought by her inhabitants. She knew of the injury. She had declared it to exist, and that it existed without warrant of law.

In the case of Ducktown Sulphur, Copper & Iron Co. *vs.* Barnes, 60 S. W. Rep. 601, et seq., after holding the facts to constitute a nuisance, the Supreme Court of Tennessee declares:

> "The carrying on of a business, in itself lawful, in the neighborhood of a dwelling-house is a nuisance, and

it will be restrained by injunction when the prosecution of such business renders the house naturally uncomfortable by smoke, cinders, or offensive odors produced thereby, although not in any degree injurious to health."

"It is not necessary that a public nuisance be injurious to health. If there be smells offensive to the senses, that is enough, as the neighborhood has a right to fresh and pure air."

"These authorities, and others that might be cited, abundantly establishes the proposition that the complainant has no right to operate its works at Ducktown if their operation is destructive or injurious to the property of appellees."

"The law will not undertake to balance the conveniences or estimate the difference between the injury sustained by plaintiff and the loss that may result to defendant from having its trade and business as now carried on found to be a nuisance. No one has a right to erect works which are a nuisance to a neighboring owner, and then say he has expended large sums of money in the erection of his works while the neighboring property is of comparatively little value. The neighboring owner is entitled to the reasonable and comfortable enjoyment of his property, and if his rights are in this respect evaded, he is entitled to the protection of the right, let the consequences be what they may."

"It is no defense to the maintenance of a nuisance that there are similar establishments in the neighborhood, and that they were there before plaintiff came. Nor is it a defense to a nuisance that it is necessary to the operation of the business of the one maintaining it."

In the case of Madison et al. *vs.* Copper Company, 113 Tenn. 340, 341, 342, a consolidation of bills for injunction, it is further judicially declared at the September Term, 1904, of the Supreme Court of Tennessee.

"The general effect produced by the smoke upon the possessions and families of complainants is as follows, viz.: Their timber and crop interests have been

> badly injured, and they have been annoyed and discommoded by the smoke, so that the complainants are prevented from enjoying their farms and homes as they did prior to the inauguration of these enterprises. The smoke makes it impossible for the owners of farms within the area of the smoke zone to subsist their families thereon with the degree of comfort they enjoyed before. They can not raise and harvest their customary crops."

The smoke produces "coughing" and "headache."

> "If this smoke continues from time to time and from year to year to envelope complainant's farm he will have to leave it, because it is injurious to the health of his wife, and that on account of the injurious effects to his crops he will be unable to support his family on it."

In the second case the findings of facts shows that the injuries to the timber and crops and to the comfort of complainants were practically the same as those already stated.

Part of the complainants were citizens of Georgia and others citizens of Tennessee. The facts stated related to Georgia after operations were begun by the Tennessee Copper Company.

The facts entitling an injunction were found, but only a conditional injunction was granted, that is, under the alleged authority of a statute of Tennessee, notwithstanding equitable and not legal remedies were sought, the court granted an injunction conditionally upon the payment of such damages as should be found by a master, to whom the case was referred. The court based its action on the following grounds:

> "In order to protect by injunction several small tracts of land, aggregating in value less that $1,000, we are asked to destroy other property worth nearly $2,000,000, and wreck two great mining and manufacturing enterprises, that are engaged in a work of very great importance not only to their owners, but to the State."

This in the face of its decision on Ducktown *vs.* Barnes, ante, that:

> "The law will not undertake to balance the conveniences or estimate the difference between the injury sustained by plaintiff and the loss that may result to defendant from leaving his trade and business as now carried on found to be a nuisance. No one has a right to erect works which are a nuisance to a neighboring owner, and then say he has expended large sums of money in the erection of his works while the neighboring property is of comparatively little value. The neighboring owner is entitled to the reasonable and comfortable enjoyment of his property, and if his rights are in this respect evaded, he is entitled to the protection of the right, let the consequences be what they may."
>
> "It is no defense to the maintenance of a nuisance that there are similar establishments in the neighborhood, and that they were there before plaintiff came. Nor is it a defense to a nuisance that it is necessary to the operation of the business of the one maintaining it."

The facts found in the Madison case, the small interest of and damage to complainants, and the great property of defendants jeopardized, are by no means the facts here existing and shown by Georgia's bill.

The value of the territory, lands, timber and rights represented in the case at bar vastly exceeds the two million dollars involved of the defendants.

The final and true reason of this most unusual and otherwise inexplicable decision is disclosed by the declaration:

> "The defendants can not reduce their ores in a manner different from that they are now employing, and there is no more remote place to which they can remove."

In other words, there could be no relief which would not result in completely and finally closing the p' nts of the defendants.

This finding is erroneous, and the Court was misled by the declarations and showing of defendants. Not only could the reduction of ore be accomplished in other manners, but by methods which would wholly eliminate the injury. As shown

by bulletin 89 of the Department of Chemistry Bureau of Agriculture, the installation of sulphuric acid chambers would wholly relieve the situation, so that the closing of defendants' works was not actually involved, but merely the expenditure of money sufficient to install a condensing plant.

V.

The facts alleged by the bill set forth the rapidly increasing destruction of all crops, vegetables, grasses, orchards, fruit trees, lumber and other vegetation within the smoke zone, the utter ruin of the lands and the conversion of the region into a barren waste, and that the property of Georgia's inhabitants is not only being destroyed, but their means of livelihood is being taken from them by the fumes generated and liberated by defendants, so that, if the fumes continue, the region subjected thereto will not only be made desolate, but the inhabitants thereof pauperized and left without means or opportunity of earning their sustenance.

Not only has the State power to protect her citizens from conditions pauperizing them and making them liable to become charges upon her, but she has power, in face of the grant of all matters of interstate commerce to the general government, to pass and enforce any and all laws necessary to prevent even the entrance within her territory of paupers or persons likely to become charges upon the State.

The decision in the case of the City of New York *vs.* Miln, 11 Pet. 141, clearly illustrates this. New York had passed a stringent Act concerning the duties and liabilities of passenger vessels arriving within the port of New York City, which was attacked on the ground that the Act attempted to regulate commerce between New York and foreign countries and was void. The Court declared the intent of the Act was to protect the State of New York from an influx of paupers who might become charges upon the State, and that the Act was constitutional and proper, its effect upon commerce notwithstanding. In passing upon this question the Court (pages 141-142) says:

"Each of these laws depends upon the same principle for its support, and that is, that it was passed by the State of New York by virtue of her power to enact such laws for her internal police as it deemed best; which laws operate upon the persons and things within her territorial limits and, therefore, within her jurisdiction.

"Now, in relation to the section of the Act immediately before us, that is obviously passed with a view to prevent her citizens from being oppressed by the support of multitudes of poor persons, who came from foreign countries without possessing the means of supporting themselves. There can be no mode in which the power to regulate internal police could be more appropriately exercised. It is the duty of the State to protect her citizens from this evil; they have endeavored to do so by passing, amongst other things, the section of the law in question. We should, upon principle, say that it had the right to do so. We think it as competent and necessary for a State to provide precautionary measures against the moral pestilence of paupers, vagabonds and possible convicts, as to guard against the physical pestilence."

If it is the duty of the State to guard its citizens from the mere possibility of persons becoming charges upon the State, how much greater is the duty to prevent an alien, one not even a denizen or a property owner, by acts taking effect within the State, from making its own citizens paupers and charges upon it.

Even Tennessee has recognized the correctness of this decision. In the case of Harbinson *vs.* Knoxville Iron Co., 103 Tenn. 441, the Supreme Court of that State citing the case of City of New York *vs.* Miln, ante, declares:

"The first right of a State, as of a man, is self-preservation, and with the State that right involves the universally acknowledged power and duty to enact and enforce all such laws, not in plain conflict with some provision of the State or Federal Constitution, as may rightly be deemed necessary or expedient for the safety, health, morals, comfort and welfare of its people."

The rule laid down in the foregoing cases has been cited with approval and followed in the following decisions of this Court:

Holmes *vs.* Jennison, 14 Pet. 568.

Moore *vs.* Illinois, 14 How. 18.

VI.

The State of Georgia is not only the protector of every inch of its territory, but it is the *parens patriæ* of each and every of its citizens. The State of Georgia, as a sovereign, guarantees by its Constitution and bill of rights thereunder complete and impartial protection of person and property, and the comfortable enjoyment thereof, to each of its citizens, and as *parens patriae* it has the right to appeal to this Honorable Court to redress wrongs and injuries within the State and upon its citizens, the perpetrators of such wrongs and the acts occasioning same being beyond the power and control of Georgia and upon the territory and under the protection of a sister State.

In passing it may be remarked that the rights involved under such a proceeding are not to be confused with rights, commercial or otherwise, without the territory and beyond the limits of the State. It is not, as in the case of Louisiana *vs.* Texas, an effort on the part of one State to force another State to maintain certain commercial relations with its citizens, but an action solely for the purpose of maintaining to its citizens the constitutional guarantees of the State for the preservation of life, health and property within its borders, and to afford the citizen the protection warranted to him both for himself and his property in return for his tax contributions to his sovereign.

That the State is *parens patriæ*, and as such is the guardian and protector of its citizens and inhabitants, is too firmly established to admit of dispute. As early as the case of Wheeler *vs.* Smith et al., U. S., 9 How. 55, it was declared that, "The State as sovereign is *parens patriæ*," and in Fountain *vs.* Ravenel, 17 How. 384, "The sovereign prerogatives of the

crown devolved in America upon the States," and that they were *parens patriæ*. The decisions are uniform in this connection.

It is the duty of the State, as *parens patriae*, to exercise all her sovereign powers for the preservation of her citizens, their lives, health and prosperity. So sacred is this duty that, the constitutional inhibition as to the abrogations of contracts to the contrary, the State can not barter away its police or other powers necessary to this end.

As stated in the case of Beer Co. *vs.* Mass., 97 U. S. 33:

> "Whatever difference of opinion may exist as to the extent and boundaries of the police power, and however difficult it may be to render a satisfactory definition of it, there seems to be no doubt that it does extend to the protection of the lives, health and prosperity of its citizens. The Legislature can not by any contract divest itself of the power to provide these objects."

This is in effect reiterated in Patterson vs. Kentucky, 97 U. S. 506, in which the Court declares that the "protection of life, health and prosperity each State owes to her citizens." And even more strongly stated in Fertilizer Co. *vs.* Hyde Park, 97 U. S. 670.

This rule is clearly set forth in the case of Caha *vs.* U. S., 152 U. S. 215, in which the Court holds:

> "The preservation of the peace and the protection of person and property are the functions of the State government."

Again, in Lake Shore Ry. *vs.* Ohio, 173 U. S. 297, it is stated:

> "All questions arising within a State that relate to its internal order, or that involve the public convenience or the general good are primarily for the determination of the State,"

that each State should provide for the welfare and convenience of its citizens and the public.

The case of U. S. *vs.* Crukshank, 92 U. S. 549, deals with the question at greater length. In this case it is stated:

"We have in our political system a government of the United States and a government of each of the several States. Each one of these governments is distinct from the others, and each has citizens of its own who owe it allegiance and whose rights within its jurisdiction it must protect."

"Citizens are members of the political community to which they belong. They are the people who compose the community, and who in their associated capacity have submitted themselves to the dominion of a government for the promotion of their general welfare and protection of their individual as well as their collective rights. In the formation of a government the people may confer upon it such powers as they choose. The government when so formed may, and when called upon should, exercise all the powers it has for the protection of the rights of its citizens and people within its jurisdiction; but it can exercise no other. The duty of the government to afford protection is limited always by the power it possesses for that purpose."

"Experience made the fact known to the people of the United States that they required a national government for national purposes. The separate government of the separate States, bound together by articles of confederation alone, were not sufficient for the promotion of the general welfare of the people in respect to foreign nations, or for their complete protection as citizens of the Confederate States. For this reason the people of the United States, 'in order to form a more perfect union, established justice, insure domestic tranquillity, provide for the common defense, promote the general welfare and secure the blessings of liberty' to themselves and their posterity (Const. Preamble), ordained and established the government of the United States, and defined its powers by a Constitution, which they adopted as fundamental law, and made it its rule of action."

The foregoing is a most forceful argument for the contention of Georgia as *parens patriæ*. Georgia is seeking to "protect the rights of those within its jurisdiction;" as sovereign, it has been "called upon for protection," and which through its

bill herein, the only way still left to it, it is seeking to give. By reason of the rights surrendered to the general government in order to "insure domestic tranquillity," it can not go into Tennessee with force of arms, by its militia, sheriffs or other officials, or in any other manner destroy, or seize the works or abate the acts destroying the property and rights of Georgia and her citizens, but instead comes to this court praying that it enforce the constitutional guarantee of the Union to Georgia, and of Georgia to her citizens, obtainable legally by reason of the National Constitution, in no other manner.

The right of the State in this connection was discussed at length in the case of In re Debs, 158 U. S. 564, which decision was quoted at length in Louisiana *vs.* Texas, 176 U. S. 19. In the last named case, this court, speaking through Chief Justice Fuller, says:

> "In Debs, petitioner, 158 U. S. 564, involving a case in the Circuit Court in which the United States had sought relief by injunction, it was observed, 'That while it is not the province of the government to interfere in any mere matter of private controversy between individuals, or to use its great powers to enforce the rights of one against another, yet, whenever the wrongs complained of are such as to affect the public at large, and are in respect of matters which by the Constitution are entrusted to the care of the nation, and concerning which the nation owes the duty to all the citizens of securing to them their common rights, then the mere fact that the government has no pecuniary interest in the controversy is not sufficient to exclude it from the courts or prevent it from taking measures therein to fully discharge those constitutional duties.' "
>
> " 'It is in this aspect that the bill before us is found. Its gravamen is not a special and peculiar injury such as would sustain an action by a private person, but the State of Louisiana presents herself in the attitude of *parens patriæ*, trustee, guardian or representative of all her citizens.' "
>
> "Nevertheless, if the case stated is not one presenting a controversy between these States, the exercise

> of the original jurisdiction by this court as against Texas can not be maintained."

The jurisdiction assumed under the statement is finally refused only because (p. 22):

> "In our judgment this bill does not set up facts which show that the State of Texas has so authorized or confirmed the alleged action of her health officer, as to make it her own, or from which it necessarily follows that the two States are in controversy within the meaning of the Constitution."

In the more recent case of Kansas *vs.* Colorado, 185 U. S. 125, the decision is directly in point. The court there held:

> "The mere fact that a State has no pecuniary interest in the controversy would not defeat the original jurisdiction of this court, which might be invoked by the State as *parens patriæ*, trustee, guardian or representative of all or a considerable portion of its citizens; and that the threatened pollution of the waters of a river flowing between States, under the authority of one of them, thereby putting the health and comfort of the citizens of the other in jeopardy, presented a cause of action justifiable under the Constitution."

Mr. Hamilton in the Federalist LXXX, after citing the grievous result of the private wars of the German Federation, declares the power and authority of the Supreme Court to be essential to the internal peace of the Union, and that "whatever practices may have a tendency to disturb the harmony between the States are proper objects of Federal superintendence and control." A further reason stated for this authority in matters jeopardizing harmony between the States is the necessity for an adjudication by a tribunal having no local attachments, which could only be had in the Federal Court.

For other authorities in point see:

> Phalen *vs.* Virginia, 8 How. 163.
> Andrews American Corporation, p. 77.
> Mormon Church *vs.* United States, 136 U. S. 1.
> Boyd *vs.* United States, 116 U. S. 616.

Debs, petitioner, 158 U. S. 564.
United States *vs.* Bell Tel. Co., 128 U. S. 315.
Louisiana *vs.* Texas, 176 U. S. 1.
Franklin Tel. Co. *vs.* Harrison, 145 U. S. 459.
Vattel's Laws of Nations, Book 1, sec. 16; Book 2, sec. 57.
Missouri *vs.* Illinois, 180 U. S. 208.
Kansas *vs.* Colorado, 185 U. S. 125.
21 Am. and Eng. Enc. of Law (2d ed.), p. 705.

The only cases which even remotely appear to bear out the contentions of defendants are New Hampshire *vs.* Louisiana, 108 U. S. 76; Wisconsin *vs.* Pelican Insurance Co., 127 U. S. 289, and an expression in Louisiana *vs.* Texas, 176 U. S., p. 16, which, if taken alone, might be misconstrued into an authority in that connection.

An analysis of these cases demonstrate conclusively that they in no manner sustain defendants' contentions. In fact, this court in the case of Missouri *vs.* Illinois, 180 U. S. 231, 232, 233 and 238, has heretofore distinguished each of these decisions. In this case it is stated:

> "In New Hamshire *vs.* Louisiana and others, and New York *vs.* Louisiana and others, 108 U. S. 76, it was found that, in view of the Eleventh Amendment to the Constitution of the United States, declaring, that 'the judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by citizens of another State, or by citizens or subjects of any foreign State,' as matter of fact, under the pleadings and testimony, the suits were commenced and were prosecuted solely by the owners of the bonds and coupons, to collect which was the object of the suits, and it was accordingly held 'that the evident purpose of the amendment, so promptly proposed and finally adopted, was to prohibit all suits against a State by or for citizens of other States or aliens, without the consent of the State to be sued, and, in our opinion, one State can not create a con-

troversy with another State, within the meaning
that term as used in the judicial clauses of the C
stitution, by assuming the prosecution of debts, ow
by the other State to its citizens. Such being
case we are satisfied that we are prohibited, both
the letter and the spirit of the Constitution, from
tertaining these suits, and the bill in each case is
missed."

"In Wisconsin *vs.* Pelican Insurance Co., 127
S. 265, 286, the nature of the case and the ques
involved was thus stated by Mr. Justice Gray, in
livering the opinion of the court: 'This actio
brought upon a judgment recovered by the Stat
Wisconsin in one of her own courts against the P
can Insurance Company, a Louisiana corporation,
penalties imposed by a statute of Wisconsin for
making returns to the insurance commissioner of
State, as required by that statute. The leading qu
tion argued at the bar is whether such an actio
within the original jurisdiction of this court. T
ground on which the jurisdiction is invoked is
the nature of the case, but the character of the p
ties, the plaintiff being one of the States of the Un
and the defendant a corporation of another of
States.'

"After citing and considering the cases, the
tice expressed the following conclusions: 'The
that the courts of no country execute the penal la
of another applies not only to prosecutions and s
tences for crimes and misdemeanors, but to all su
in favor of the State for the recovery of pecuni
penalties for any violation of statutes for the pro
tion of its revenue, or other municipal laws, and
all judgments for such penalties. . . . . Fr
the first organization of the courts of the Un
States, nearly a century ago, it has always been
sumed that the original jurisdiction of this court o
controversies between a State and citizens of anot
State, or of a foreign country, does not extend to
suit by a State to recover penalties for a breach
her own municipal law. . . . . The statute
Wisconsin, under which the State recovered in

of her own courts the judgment now and here sued on, was in the strictest sense a penal statute, imposing a penalty upon any insurance company of another State, doing business in the State of Wisconsin without having deposited with the proper officer of the State a full statement of its property and business during the previous year. . . . . This court, therefore, can not entertain an original action to compel the defendants to pay to the State of Wisconsin a sum of money in satisfaction of the judgment for that fine."

n reference to Louisiana *vs.* Texas, the court says:

"After quoting the provisions of the statute of the State of Texas regulating the subject of quarantine, the Chief Justice proceeded to say: 'It is not charged that this statute is invalid, nor could it be if tested by its terms. While it is true that the power vested in Congress to regulate commerce among the States is a power complete in itself, acknowledging no limitations other than those prescribed in the Constitution, and that where the action of the States in the exercise of their reserved powers comes into collision with it, the latter must give way, yet it is also true that quarantine laws belong to that class of State legislation which is valid until displaced by Congress, and that such legislation has been expressly recognized by the laws of the United States almost from the beginning of the government. . . . . The complaint here, however, is not that the laws of Texas in respect of quarantine are invalid, but that the health officer, by rules and regulations framed and put in force by him thereunder, places an embargo in fact on all interstate commerce between the State of Louisiana and the State of Texas, and that the Governor permits these rules and regulations to stand and be enforced, although he has the power to modify or change them. The bill is not rested merely on the ground of the imposition of an embargo without regard to motive, but charges that the rules and regulations are more stringent than called for by the particular exigency, and are purposely framed with the view to benefit the State of Texas, and the city of

Galveston in particular, at the expense of the State of Louisiana, and especially of the city of New Orleans."

"But in order that a controversy between States, justiciable in this court, can be held to exist, something more must be put forward than that the citizens of one State are injured by the maladministration of the laws of another. The States can not make war, or enter into treaties, though they may, with the consent of Congress, make compacts and agreements. Where there is no agreement, where breach might create it, a controversy between States does not arise unless the action complained of is State action, and acts of State officers in abuse or excess of their powers can not be laid hold of as in themselves committing one State to a distinct collision with a sister State.

"In our judgment, this bill does not set up facts which show that the State of Texas has so authorized or confirmed the alleged action of her health officer to make it her own, or from which it necessarily follows that the two States are in controversy within the meaning of the Constitution.

"Finally, we are unable to hold that the bill may be maintained as presenting a case of controversy 'between a State and citizens of another State.' Jurisdiction over controversies of that sort does not embrace the determination of political questions, and, where no controversy exists between States, it is not for this court to restrain the Governor of a State in the discharge of his executive functions in a matter lawfully confided to his discretion and judgment. Nor can we accept the suggestion that the bill can be maintained as against the health officer alone on the theory that his conduct is in violation or in excess of a valid law of the State, as the remedy for that would clearly lie with the State authorities, and no refusal to fulfil their duty in that regard is set up.

"In truth, it is difficult to see how on this record there could be a controversy between the State of Louisiana and the individual defendants without involving a controversy between the States, and such a controversy, as we have said, is not presented."

In its final analysis of this case, on page 240, this court declares:

> "In the case of New Hampshire *vs.* Louisiana, and New York *vs.* Louisiana, ut supra, jurisdiction was denied to this court where the cause of action belonged to private persons, who were endeavoring to use the name of one State to enforce their rights of action against another, though, perhaps, it may be said that jurisdiction was really entertained, and that the bills were dismissed, because the court found that, under the pleadings and testimony, the State's complainant had no interest of any kind in the proceedings.
>
> "So, too, in Wisconsin *vs.* Pelican Insurance Co., ut supra, the court held that, notwithstanding the action was brought by a State against the citizens of another State and was thus within the letter of the Constitution, yet that the court had a right to inquire into the nature of the case, and, when it found that the object of the suit was to enforce the penal laws of one State against a citizen of another, to refuse to exercise jurisdiction.
>
> "In the case of Louisana *vs.* Texas, ut supra, the bill was dismissed because a controversy between the two States was not actually presented; that what was complained of was not any action of the State of Texas, but the alleged authorized conduct of its health officer, acting with a malevolent purpose against the city of New Orleans. Here again it may be observed that the court did not decide jurisdiction, but exercised it in holding that the facts alleged in the bill did not justify the court in granting the relief prayed for."

The foregoing summary discloses the failure of these cases as authorities for defendants too fully to require further comment.

VII.

That Georgia is the sovereign owner of roads and highways, and, as guardian of the public in its rights therein, for the preservation of sunlight and pure air thereon and the comfort and

convenience of passers thereover, and for the protection of intrastate commerce and communion afforded thereby, may maintain any necessary action can hardly be seriously disputed.

As stated in the case of Jones *vs.* Brim, 165 U. S. 182, citing New Orleans Gas Co. *vs.* Louisiana Light Co., 115 U. S. 650, to the same effect with approval.

> "Embraced within the police powers of a State is the establishment, maintenance and control of public highways."

Within the police power of a State is the abatement by summary proceedings any nuisance affecting highways.

Lustona Steel, 152 U. S. 136.
Davidson *vs.* New Orleans, 96 U. S. 97.
Goluck *vs.* Hopkins, 118 U. S. 356.
Holden *vs.* Hardy, 169 U. S. 392.

Although it is ordinarily within the power of Georgia to abate summarily all nuisances upon her roads and highways, it is, under the peculiar facts of the case at bar, impossible for Georgia to exercise that power without committing acts within the inhibition of the Constitution of the United States and consequently she applies to this court for the protection of the highways in her keeping which are injured, made dangerous and inconvenient by the acts of defendants, the relief sought being directly within the province of this court.

Georgetown *vs.* Alexandria Canal Co., 12 Pet. 91.
Eden on Inj., p. 267.
Penn *vs.* Wheeling Bridge Co., 13 How. 518.
Attorney-General *vs.* Jamaica, etc., Co., 133 Mass. 361.
Attorney-General *vs.* Forbes, 2 My. and Cr. 123.
Coosaw Mining Co. *vs.* South Carolina, 144 U. S. 550.
Debs, petitioner, 158 U. S. 564.
American Steel Co. *vs.* Wire, etc., Union, 90 Fed. Rep. 614.

Mr. Justice Harlan, in the case of Coosaw Mining Co. *vs.* South Carolina, 144 U. S. 550, quoting with approval from Attorney-General *vs.* Forbes, declares:

> "This court, acting as a court of equity, has a well-established jurisdiction upon a proceeding by way of information, to prevent nuisance to public harbors and public roads, in short, generally to prevent public nuisance."

To the same effect is the case of Attorney-General *vs.* Jamaica, etc., Co., 133 Mass. 361, which is also cited with approval.

In the case of Debs, petitioner, 158 U. S. 564, the court states:

> "It is said that seldom have the courts assumed jurisdiction to restrain by injunction in suits brought by the government, either State or National, obstructions to highways, either artificial or natural. This is undoubtedly true, but the reason is that the necessity for such interference has only been occasional. Ordinarily, the local authorities have taken full control over the matter, and by indictment for misdemeanor, or in some kindred way, have secured the removal of the obstruction and the cessation of the nuisance."

The authorities, so far as counsel could discover, were uniform in their declaration of the right of action in the sovereign as such cases and the propriety of suit thereby.

VIII.

The State of Georgia is the ultimate owner and proprietor of all lands within its borders, and as such has a right of action, to prevent waste thereon or the destruction thereof by an alien and non-resident.

As a matter of fact, the State may even regulate the use of its property by its own inhabitants, may prescribe a specific policy. As stated in Clark *vs.* Smith, 13 Pet. 203, a State may prescribe any policy for the protection of agriculture of the country that she may deem wise and proper. She may prevent

the waste of any article benefiting the general public, whether it be from under the soil, such as natural gas, or above, as in the case of forests or crops. Georgia has the right to make any and all provisions and do all things necessary for the preservation of timber and orchards as well as agriculture. Certainly she must have the right to guard and protect her soil and the integrity of her domain. It must naturally follow that any alien transgressing her regulations, injuring her agriculture, destroying her forests, committing waste upon her territory and damaging her soil, if beyond the effect of her own power and laws, may be proceeded against in this honorable court.

Rhode Island *vs.* Massachusetts, 12 Pet. 657.
Georgia *vs.* Stanton, 6 Wall. 50.
Indiana *vs.* Kentucky, 136 U. S. 510.
Clarke *vs.* Smith, 13 Pet. 203.

By reason of its ownership, actual property rights, in this connection, are involved. In the case of Georgia *vs.* Stanton, 6 Wheat. 93, the court in commenting on the case of Rhode Island *vs.* Massachusetts, supra, as to territory and boundary, declares:

> "The right of property was undoubtedly involved, as in this county where feudal tenures are abolished in cases of escheat the State takes the place of the feudal lord by virtue of its sovereignty, as the original and ultimate proprietor of all the lands within its borders."

Mere political questions can afford this court no jurisdiction and the power asserted by the court on boundary cases is based upon the exercise of sovereignty and property rights of the State. If the State be denied the right to protect the lands and soil within her territory, then her proprietorship in and sovereignty thereover must indeed be small, and in addition, the right to come into this court in boundary controversies must be based upon grounds other than the right of property, which,

as before stated, counsel believes to afford the jurisdiction in that connection. The jurisdiction under this second ground, that afforded by a property right being involved, is discussed in the following paragraph.

IX.

By reason of the interference with the taxing powers of the State, as well as the tax returns from the territory damaged, the State has a cause of action upon two grounds—the interference with and, in a measure the destruction of, a sovereign attribute and because a direct property right is concerned.

The power of taxation, as such, is an attribute, a part of the sovereignty.

> North Mo. R. R. *vs.* Maguire, 20 Wall. 60.
> Bailey *vs.* Maguire, 2 Wall. 226.
> Prov. Bank *vs.* Billings, 4 Pet. 562.

As said in the case of Penn. *vs.* Wheeling Bridge Co., 13 How., p. 560:

> "On a question of disputed boundary between two States, although the inquiry of the court is limited to the establishment of a common line, yet the exercise of sovereign authority over more or less territory, may depend upon the decision. This gives great dignity and importance to such a controversy, and renders necessary a broader view than on a question as to the mere right of property."

In Fowler *vs.* Lindsey, 3 Dall 411, it is held that a State may proceed in equity to protect such incorporeal rights as its sovereign attributes. The attribute of sovereignty here sought to be protected must then attach to the thing over which it may be exercised, that is, the lands, tenements and hereditaments within the State of Georgia. Within a large area the defendants are wholly destroying the thing to which this attribute attaches. If it may legally destroy part, it may lawfully destroy the whole. Wherein lies the difference in the

ability to destroy the right and the power to destroy the thing to which the right applies? The right to exercise sovereignty over a thing is essentially destroyed with the destruction of the thing. Sovereignty to tax is nothing if the thing to be taxed may be annihilated.

When the State of Georgia exercises this sovereign attribute, and by its Legislature fixes its rate of taxation for a given period, then the tax and tax liens thereunder become property rights within the State. So surely are such liens and the taxes due thereunder property that the State may even sell, assign or transfer its taxes and tax liens. It could hardly be contended that the State could sell or transfer its sovereign attributes or incidents of its sovereignty.

The tax being a property right, any destruction of the property against which such tax, such specific rate, is assessible, results in a decrease in assessible value and in a direct property loss to the State in consequence. If all property in Georgia were destroyed then there would be a complete loss of all taxes against same. Many farms in the region have already been ruined and abandoned desolate or wild lands.

Property rights, then, are involved both by reason of the loss of taxes and the fact that the State is the original and ultimate owner of all lands within its borders, including that damaged and destroyed by defendants.

That the State may maintain its bill where it has a property right involved, a direct interest in the controversy, was long ago declared by this court and is now settled law.

Pennsylvania *vs.* Wheeling Bridge Co., 13 How. 559.
Florida *vs.* Anderson, 91 U. S. 667.
Texas *vs.* White, 7 Wall. 700.
Pennsylvania *vs.* Quicksilver Co., 10 Wall. 553.
Alabama *vs.* Burr, 115 U. S. 413.

In the case of Pennsylvania *vs.* Wheeling Bridge Co., ante, the court states:

> "In this case the State of Pennsylvania is not a party by virtue of its sovereignty. It does not come here to protect the rights of its citizens. . . . . It assumes and claims not an abstract right but a direct interest in the controversy, and that the power of this court can redress its wrongs and save it from irreparable injury. If such a case can be made out the jurisdiction may be maintained."

In the case of Florida *vs.* Anderson, the first headnote is as follows:

> "A State which has a direct interest in a railroad by reason of holding $4,000,000 of bonds which are a statutory lien upon the road, and where the trustees of the bonds are merely agents of the State invested with legal titles of the lands, may seek equitable relief against citizens of another State by filing an original bill in this court to subject the road to the payment of such bonds."

In fact in every case in which the question has been presented to this honorable court, the decisions have uniformly declared the right of a State to maintain such an action and the jurisdiction of the Supreme Court maintained in such an action when so filed.

REMEDY AT LAW.

The State in this cause is before this court in its sovereign capacity, presenting its controversy and praying an adjudication by the court. Counsel insist that the question as to whether or not there might be an adequate remedy at law is, under the controversy set up, of no moment, the jurisdiction of the court depending solely upon whether or not a "controversy between a State and a citizen of another State" has been presented.

There is, however, no adequate remedy at law to be had. The objection in this connection seems to be uniformly raised and uniformly overruled in every proceeding, involving nuisance,

before this court. It would appear that this defense must have been raised to comply with a precedent rather than with the idea of presenting an objection which possessed actual merit.

Mr. Justice Stevens, in Missouri *vs.* Illinois, 180 U. S. 244, et seq., after sustaining the jurisdiction of the court under a bill in equity for the abatement of a nuisance, reviews a number of cases, the first of which is Attorney-General *vs.* Jamaica Pond Corporation, as follows:

> "The defendant contends that the law furnishes a plain, adequate and complete remedy for the nuisance by indictment or by proceedings under the statute for the abatement of a nuisance by the board of health. Neither of these remedies can be invoked until a part of the mischief is done, and they could not in the nature of things restore the pond, the land and the underground currents to the same conditions in which they now are. In other words they could not remedy the whole mischief. The prevention force of a decree in equity restraining the illegal acts before any mischief is done gives clearly a more efficacious and complete remedy."

The nature of equitable remedy in the case of public nuisances was well described by Mr. Justice Harlan, speaking for the court in the case of Mugler *vs.* Kansas, 123 U. S. 623, 673:

> "The grounds of this jurisdiction, in cases of purpresture as well as or of public nuisances, is the abilty of courts of equity to give a more speedy, effectual and permanent remedy than can be had at law. They can not only prevent nuisances that are threatened, and before irreparable mischief ensues, but arrest or abate those in progress, and by perpetual injunction protect the public against them in the future; whereas courts of law can only reach existing nuisances, leaving future acts to be the subject of new prosecutions or proceedings. This is a salutory jurisdiction, especially where a nuisance effects the health, morals or safety of the community."

In Coosaw Mining Co. *vs.* South Carolina, 144 U. S. 550, it was said by this court through Mr. Justice Harlan, after citing English and American cases:

> "Proceedings by law or indictment can only reach past or present wrongs done by appellant and will not adequately protect the public interest in the future."

Further, under the general rules of equity, the suit could be maintained.

It is well settled that the test of equity jurisdiction is the absence of a complete and adequate remedy at law as practical and efficient as the equitable remedy, as disclosed from the pleadings.

Payne *vs.* Hook, 7 Wall. 430.
Ins. Co. *vs.* Bailey, 13 Wall. 621.
Davis *vs.* Wakelee, 156 U. S. 688.
Wile *vs.* Cox, 15 How. 420.
Thompson *vs.* Allen Co., 115 U. S. 554.
Rich *vs.* Broxton, 158 U. S. 406.

That Georgia has any remedy at law whatever surely can not be seriously urged. She has no jurisdiction of the defendant or the rem. Her remedy at law extends but within her confines. Even should she yield her sovereign dignity and consent to go into the courts of Tennessee, she has no actual right in that State. Tennessee may through comity open her courts or close them. If they are closed Georgia could not be heard to complain that she had lost any right. For an adequate remedy at law there must be an actual right and not the mere possibility of permission to seek a remedy through court.

For the citizens of Georgia, the legal remedy must be as complete and adequate and as practical and efficient as the relief under equity. That there is no remedy whatever at law we believe we can show, but even should we accept defendants' views and grant that there is a remedy in view of the claim that Georgia's citizens may go to Tennessee and sue for

damages, can it be said that the remedy is as complete, adequate and efficient as a bill in equity.

The citizen's property, real property, is in Georgia, his residence is in Georgia, the acts complained of have been, are being, and are threatened to be committed in Georgia, and all that the remedy at law could afford is the right to go into a foreign jurisdiction and sue for damages under such terms as the foreign courts might prescribe. Does this come within the limitation of a complete, adequate, practical and efficient remedy? Furthermore, the nuisance is a continuing nuisance, the damage inflicted thereby growing each day. Not only is this the result in the case of the people now subject thereto, but it is also constantly affecting new people and territory. This alone would be sufficient to bring the matter within the purview of a court of equity.

It is most seriously urged by complainant that no remedy at law whatever, within the true meaning of the term, exists for either Georgia or her citizens. As before stated, the citizen, his property and the injurious acts are all within the State of Georgia. The rights of the citizens, his rights and remedies concerning his property as well as his recourse for acts committed thereon and within the State are governed solely by the laws of Georgia, and under these laws alone has the citizen a remedy. Georgia's laws are not extraterritorial. If enforced at all in a foreign jurisdiction, they are enforced through comity. It must follow then that what legal remedy exists for him exists in the courts of Georgia, and if no legal remedy exists in Georgia, no remedy at law is afforded.

The States, while members of the Union, are to each other with references to their territory, laws and the rights therein, wholly foreign.

Buckner *vs.* Finley, 2 Pet. 591.
Bank of U. S. *vs.* Dowell, 12 Pet. 54.
Bank of Augusta *vs.* Earle, 13 Pet. 590.
Pennoyer *vs.* Neff, 95 U. S. 722.

In Buckner *vs.* Finley, the Court declares:

> "The States are necessarily foreign and independent of each other. Their Constitution and forms of government being, although republican, altogether different, as are their laws and institutions."

The rule is stated at greater length in Pennoyer *vs.* Neff, which holds:

> "Every State possesses exclusive jurisdiction and sovereignty over persons and property within its territory. As a consequence every State has the power to determine for itself the civil states and capacities of its inhabitants; to prescribe the subjects upon which they may contract the forms and solemnity with which their contracts shall be executed, the rights and obligations arising from them, and the mode in which their validity shall be determined and their obligations enforced; and also to regulate the manner and conditions upon which property situated within such territory, both personal and real, may be acquired, enjoyed and transferred. The other principle of public law referred to follows from the one mentioned; that is, that no State can exercise direct jurisdiction and authority over persons and property without its territory. Story, Confl. Laws C. 2; Wheat Int. Law P. 12 C. 2. The several States are of equal dignity and authority, and the independence of one implies the exclusion of all power from all others. And as it is laid down by jurists, as an elementary principle, that the laws of one State have no operation outside of its territory, except so far as is allowed by comity; and that no tribunal established by it can extend its process beyond that territory so as to subject either persons or property to its decisions. 'Any exertions of authority of this sort beyond this limit,' says Story, 'is a mere nullity and incapable of binding such persons or property in any other tribunal.'"

Not only are the States foreign to each other, but their laws, judgments, and the actions of their courts are foreign. The courts of one State will not even take judicial notice of the

laws of another State, nor can the court be charged with knowledge of the laws of another State.

Talbot *vs.* Seeman, 1 Cranch, 38.
Church *vs.* Hubbart, 2 Cranch, 236.
Strother *vs.* Lucas, 6 Pet. 768.
Ennis *vs.* Smith, 14 How. 426.
Dainese *vs.* Haile, 91 U. S. 21.
Liverpool Steamship Co. *vs.* Phenix Co., 129 U. S. 445.

There is no common law of the United States and that in force in each State is dependent upon the action of the State. The common law may be qualified or wholly revoked. The common law like the statute is separate and distinct in the several States.

As stated in Wheeler *vs.* Smith, 9 How. 78:

> "The common law, in all its diversities has not been adopted by any one of the States. In some of them it has been modified by statutes, in others by usage. And from this it appears that what may be the common law of one State is not necessarily the common law of any other. We must ascertain the common law of each State by its general policy, the usages sanctioned by its courts and statutes."

In some of the States the common law has been wholly displaced, in others modified. In each State, however, its own statutes in this respect are supreme. As declared in the case of Northern Pacific R. R. Co *vs.* Herbert, 116 U. S. 654:

> "We do not perceive that the provision of the sixth section of the Civil Code of Dakota, that in the Territory 'There is no common law in any case declared by Code,' at all affects the question before us. There can not be two rules of law on the same subject contradicting each other. Therefore, when the Code declares the law there can be no occasion to look further."

It must follow then that the common and statute law of each State is separate and distinct and likewise the remedy at law. No law, therefore, can govern the property of the citizens of

Georgia, within that State, nor acts committed on or injuries done to such property except the laws of Georgia.

The laws of Georgia have no extraterritorial force or effect. If Tennessee enforces them, she does so only through comity and to such extent as it may please her—Georgia's remedy at law, indictment even under comity, she can not enforce. The remedy of Georgia's citizens she enforces only so far as they do not conflict with Tennessee's rules and remedies, and only to such an extent and for so long a time as she sees fit. This is clearly stated in Hoyt *vs.* Sprague, 103 U. S. 630, which holds:

> "No State or nation can, by its laws, directly or indirectly, affect or bind property out of its territory or persons not resident therein. Whatever force or obligation the laws of one country have in another, depend solely upon the laws of the latter, that is, upon the comity exercised by it."

Measured by still another rule, it is clearly shown that there is no remedy at law. The pendency of a suit in Tennessee would not even bar a further suit in Georgia. Could Georgia get jurisdiction of the person or property of the defendants under a suit in Georgia, the plea of suit pending, or even former action, so far as an action in Tennessee is concerned, would not be sustained. This was clearly settled in Insurance Co. *vs.* Brune's Assignee, 96 U. S. 592, 593, which case and the authorities therein have been uniformly cited with approval.

While this court's jurisdiction in no manner depends upon the remedies which Georgia's citizens might have in Tennessee, a further phase of the case serves to illustrate that there is no remedy at law adequate or inadequate, even to Georgia's citizens. The damage to property in Georgia is to real and not personal property. The remedy for such injuries is afforded by an action for trespass. Under the unusual facts as to the damage, an action for trespass could not be maintained as the

injury is in Georgia and the defendant is in Tennessee. This is clearly shown by the decision in the case of McKenna *vs.* Fisk, 1 How. 249, which holds:

> "It is too late for us to enquire whether it was wise and politic to make a distinction between transitory and local actions; it is sufficient for the courts that the law has settled the distinction and that an action *quare clausam fregit* is local. We may try actions here, which are in their nature transitory, arising out of actions abroad; but not such as are in their nature local."

To the same effect is the decision in Ellenwood *vs.* Marietta Chair Co., 158 U. S. 105, which arose upon facts in a large measure similar to those at bar. In the Ellenwood case the property damaged was in West Virginia and the defendants residents of Ohio. The damage arose through the destruction of timber by defendants, the timber, however, being retained and converted to the use of defendant and not merely destroyed as in the present case. The Marietta Chair Company was sued in Ohio, the State of its residence, and the suit was dismissed, the court declaring:

> "By the law of England and those States of the Union whose jurisprudence is based upon the common law, an action for trespass upon land, like an action to recover title or the possession of the land itself, is a local action, and can only be brought within the State in which the land lies."
>
> "The entire cause of action was local. The land trespassed upon being in West Virginia, the action could not be maintained in Ohio. The Circuit Court of the United States sitting in Ohio had no jurisdiction of the cause of action, and for this reason, if for no other, rightly ordered the cause to be stricken from its docket, although no question of jurisdiction had been made by demurrer or plea."

Tennessee, through its highest court, has reiterated the foregoing declarations. In Roach *vs.* Damron *et al.*, 2 Humph. (21 Tenn.) 245, it is stated:

> "Trespass *quare clausam fregit* is a local action, and the land upon which the trespass is committed must be proved to lay in the county in which the action is brought. A verdict does not cure deficiency of proof in this respect."

The citizen of Georgia, then, can not go into Tennessee for trespass upon his property; can not enforce his rights under the laws of Georgia, and, under defendants' view of the law, by the limitation under Georgia's laws, after four years, loses his legal rights in the premises merely because there is no forum through which he can enforce them.

The mere fact that there may be some statutory permission to appeal to the courts of Tennessee by no means, as this Court has repeatedly held, constitutes such a remedy at law as would defeat the equity jurisdiction of the courts of the United States.

Smith *vs.* Reeves, 178 U. S. 444.
Boyle *vs.* Zacharie, 6 Pet. 658.
Robinson *vs.* Campbell, 3 Wheat. 212.
U. S. *vs.* Howland, 4 Wheat. 108.
Dodge *vs.* Woolsie, 18 How. 658.
Ridings *vs.* Johnson, 128 U. S. 217.
Mississippi Mills *vs.* Cohn, 150 U. S. 150.

As stated in Smith *vs.* Reeves, ante: "One who is entitled to sue in the Federal Circuit Court may invoke its jurisdiction in equity whenever the established principles and rules of equity permit such a suit in that court, and he can not be deprived of that right by reason of his being allowed to sue at law in a State court upon the same cause of action."

The courts of Tennessee deny to the citizen of Georgia the right to maintain an action for trespass. As a matter of fact, it has never been directly declared that the citizen of Georgia had even permissive remedies in the courts of Tennessee, either at law or equity.

Trespass and nuisance by trespass being, under the laws of Tennessee, exclusively local, it must follow that the trespass and nuisance in Georgia are beyond its jurisdiction.

LACHES.

This is a hearing upon bill and demurrer and, consequently, all allegations in the bill are confessed and laches, if any there be, must appear from the face of the pleadings. Facts not so appearing can not be injected by demurrer.

Tyler *vs.* Hand, 7 How. 582.
Stewart *vs.* Masterson, 131 U. S. 158.
Richardson *vs.* Boston, 24 How. 192.
Griffing *vs.* Gibb, 2 Black. 523.

The defendants base their claim as to laches upon the findings of fact in a decision rendered by the Supreme Court of Tennessee in the case of Madison *vs.* Ducktown Sulphur, Copper & Iron Co. *et al.*, 111 Tenn. 338.

That this Court will take judicial notice of facts found under a suit in a jurisdiction foreign to that in which the acts complained of are committed and the land injured lies, in a suit in which the complainant herein was not a party—facts in a large measure in controversy with the allegations of the bill herein—is a most novel proposition, and one in conflict with the holdings of this Court. The Court may take judicial notice of the laws of Tennessee as expressed by her statute books or decisions of her court in certain character of causes, under proper pleading, but findings of fact could hardly, even under the most elastic definition, be classified under laws, nor as matters of judicial notice under this cause.

As a matter of fact, the findings of the decision are in several respects erroneous, as exhibited by Reports of the U. S. Geological Survey and House Documents, which show that the Ducktown Sulphur, Copper & Iron Co. only began smelting in anything like its present capacity after 1900. That any injury in Georgia existed therefrom prior to a time immediately before the institution of Georgia's first bill is not estab-

lished or even claimed in the Madison suit. The former operations referred to involved only "black copper" ore, which carried an exceedingly low per cent. of sulphur and but little, if any, of the gases now complained of were produced.

As to the Tennessee Copper Company, the Court declares no laches exists, nor, for that matter, does it hold laches to have applied to but a single plaintiff, one who had lived nearest the works and part of whose property had been subjected to the fumes since the Ducktown Company began smelting, and then only to the fumes from the Ducktown Company. In reference to a denial of the right to equitable relief by reason of laches, the Court, on p. 356, declares:

> "It does not apply to these complainants, however, in so far as they seek relief against the Tennessee Copper Co., nor to Avery, McGehee or Isaac Farmer seeking relief against the latter company, inasmuch as the bill in the the second case was filed about two years (26½ months) after the Tennessee Copper Company began roasting ore, and the bill in the third case was filed about one year (sixteen months) from the date referred to."

Georgia filed her first bill within the length of time herein stated against the Ducktown Sulphur, Copper & Iron Co., after it began roasting and smelting to its capacity, and likewise within said time against the Tennessee Copper Co., dating from the initiation of its smelting.

It is true Georgia's bill was dismissed, but it was dismissed upon the understanding and under the agreement that the defendant would abandon the methods of operation causing the damage and nuisance, and abate said nuisance, and upon the failure of defendants to abate the same the present bill was filed.

In addition to all this, laches can not be set up as against a sovereign. The doctrine *nullus tempus occurit regi* here applies. The injury is in Georgia and to Georgia soil. It has

been repeatedly held that laches can not be imputed to the government.

U. S. *vs.* Kirkpatrick, 9 Wheat. 735.
Dox *vs.* Postmaster-General, 1 Pet. 325.
Steele *vs.* U. S., 113 U. S. 135.
U. S. *vs.* Dallas Co. 140 U. S. 632.
San Pedro Co. *vs.* U. S. 146 U. S. 135.
Stall *vs.* Brewer, 64 Ala. 298.
Commonwealth *vs.* Baldwin, 1 Watts 55.
County *vs.* Commonwealth, 36 Pa. St. 536.

Under still another phase, defendants could not assert the right to continue the nuisance. A corporation, unlike an individual, has no powers not expressly conferred upon it. Beyond the State of its incorporation its powers depend upon the laws of the several States and the acts of such corporation bringing it within the benefit of such laws. The defendants are non-resident corporations, with no corporate authority in Georgia. They neither have, nor can have, prescriptive rights within Georgia with relation to their business or operations. They have neither been chartered, licensed or empowered to come within the State, and it can hardly be asserted that, without such authority, they can assert a prescriptive right to commit acts which are crimes under the laws of the State.

Furthermore, this Court, in the case of Fertilizer Co. *vs.* Hyde Park, 97 U. S. 668, has expressly declared:

> "Every right, from absolute ownership in property down to a mere easement is purchased and holden subject to the restriction that it shall be so exercised as not to injure others. Though at the time it be remote and inoffensive, the purchaser is bound to know at his peril that it may become otherwise by the residence of many people in its vicinity, and that it must yield to by-laws and other remedies for the suppression of nuisances."
>
> "In such cases, prescription, whatever the length of time, has no application. Every day's continuance

> is a new offense, and it is no justification that the party complaining came voluntarily within its reach. Pure air and the comfortable enjoyment of property are as much rights belonging to it as the right of possession or occupancy."

Under no view, it would seem, could laches or alleged prescriptive rights avail defendants in the maintenance of the nuisance.

In conclusion, counsel submits that Georgia, upon each of the grounds enumerated, has the right to maintain her suit; that a bill lies in equity to this Court to remedy the wrongs alleged, and that the defendants have acquired no rights through laches, prescription, or otherwise, which could in any maaner affect or defeat complainant's rights or remedies under such bill.

Respectfully submitted.

JOHN C. HART,
Attorney-General of Georgia.
LIGON JOHNSON,
Solicitor for Complainant.

No. 4 Orig.
O.T. 1907 FILE COPY.
Orig.
O.T. 1906

IN THE

Supreme Court of the United States

October Term, 1906

Supreme Court U. S.
FILED
APR 23 1906
JAMES H. McKENNEY,
Clerk.

No. 5 ORIGINAL CAUSE
IN EQUITY

THE STATE OF GEORGIA, BY ITS ATTORNEY GENERAL, JOHN C. HART, Plaintiff.

vs.

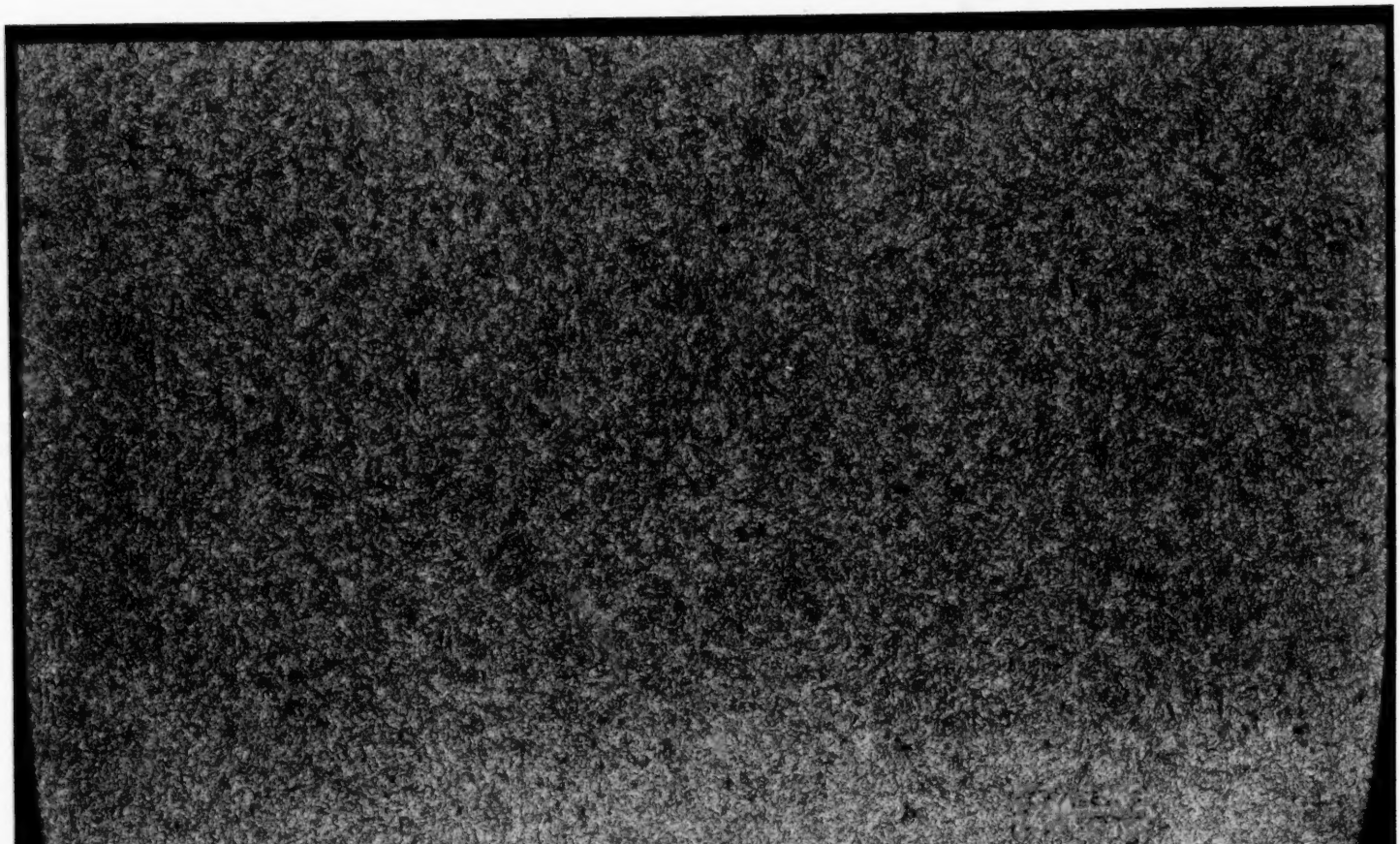
THE TENNESSEE COPPER COMPANY, AND THE DUCKTOWN SULPHUR, COPPER & IRON COMPANY (LIMITED), Defendants.

THE ANSWER OF THE DEFENDANT, TENNESSEE COPPER COMPANY, TO THE RULE TO SHOW CAUSE WHY A TEMPORARY RESTRAINING ORDER SHOULD NOT ISSUE.

HOWARD CORNICK,
JOHN H. FRANTZ,
Solicitors.

MARTIN H. VOGEL,
Of Counsel.

S. B. NEWMAN & CO., KNOXVILLE.



No. 13

ORIGINAL CAUSE

IN EQUITY

IN THE SUPREME COURT OF THE UNITED STATES

October Term, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY GENERAL, JOHN C. HART, Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY, AND THE DUCKTOWN SULPHUR, COPPER & IRON COMPANY (LIMITED), Defendants.

THE ANSWER OF THE DEFENDANT, TENNESSEE COPPER COMPANY, TO THE RULE TO SHOW CAUSE WHY A TEMPORARY RESTRAINING ORDER SHOULD NOT ISSUE.

Comes the defendant, Tennessee Copper Company, and answering the rule to show cause why a temporary restraining order should not issue, which rule was made returnable to December 4th, 1905, and by stipulation of counsel continued, and by motion of plaintiff set for April 23rd, 1906, and not answering now the bill of complaint filed herein for the reason that demurrer heretofore has been filed to said bill, which demurrer has not been disposed of, but answering only the said rule and in discharge of said rule says:

First.

The defendant is a corporation under the laws of the State of New Jersey, but domiciled in the State of Tennessee, by virtue of a compliance with its laws and is engaged in mining and smelting, and refining ores at Ducktown, Polk County, Tennessee.

Second.

The capital stock and bonded indebtedness of this defendant is Five Millions Five Hundred Thousand Dollars, and it and its co-defendant have invested in their mines and in their smelter plants and refining plants in Polk County, Tennessee, millions of dollars.

Third.

Copper was discovered first at Ducktown, as defendant is informed and believes, in about the year 1849 and has been mined and smelted at said point almost continuously since that time down to the present time, with the exception of about eleven years during the period between the years 1879 and 1890, when work was temporarily suspended. The predecessors in title and operations of this respondent, having begun mining about the year 1852. The direct predecessor in title of defendant Tennessee Copper Company was the Pittsburg and Tennessee Copper Company, which began operations of mining and smelting copper ores in said Ducktown region, and where this defendant's plant is now located, about 1891, and said Pittsburg and Tennessee Copper Company continued to mine and smelt ores at said place until June of the year 1899, when its interests and property were purchased by defendant Tennessee Copper Company, which immediately began the expenditure of large sums of money, putting in new machinery and equipment and preparing for continuing and increasing the operations begun by said Pittsburg and Tennessee Copper Company.

The defendant, Tennessee Copper Company, began its

operations of roasting and smelting ore in May of the year 1901, and has continued them up to the present date with the exception that as hereinafter stated about the year 1904, it changed its process of smelting from open heap roasting to that of green ore or pyrite smelting.

Fourth.

It is possible that under the old methods of open heap roasting carried on by the Tennessee Copper Company prior to 1904, some slight damage was caused to the property of citizens in Georgia immediately adjacent to the state line between the States of Tennessee and Georgia, by reason of the gases given off of the said roast piles, but even then the damages, if any, which were suffered by said citizens were trivial in character and very few complaints were ever received from any of said citizens.

Fifth.

About the year 1904, the State of Georgia brought a suit in this court against its co-defendant, the Ducktown Sulphur Copper & Iron Company, Limtied, and the Pittsburg and Tennessee Copper Company, afterwards amended by making the Tennessee Copper Company a party instead of the Pittsburg and Tennessee Copper Company. Said suit was voluntarily dismissed by said State of Georgia because this respondent agreed to abandon its then methods of open heap roasting and adopt the method of green ore smelting referred to, which was immediately done. It was believed by the offcials of the State of Georgia as well as by the officials of both copper companies that the abandonment of the open heap roasting method would relieve all complaint.

Sixth.

In connection with said green ore smelting it was understood that said Tennessee Copper Company would erect a tall chimney or stack, and carry the gases emanating from the plant of this respondent up to a considerable height in the air

and discharge them at said height, so that, if possible, said gases might be diluted and become innocuous before reaching the ground. At the time the bill was filed in the present case, said stack was in process of erection but had not been completed, and thereupon, on the 4th day of December, 1905, it was agreed that this case should be continued indefinitely to the end that said new stack and furnaces being erected in connection therewith might be completed and placed in operation. Said new stack has been completed and placed in operation, as have also been the new furnaces then in process of construction, and respondent believes that the use of said new stack will entirely eliminate all complaints on the part of property-holders in said community.

Seventh.

Respondent would show to the court that it is now using and has always used the latest and best known scientific methods in the mining and smelting of its ores; that it has employed only the most skillful experts and means in said mining and smelting; that its mining and smelting operations are carried on in the latest, most skillful and most scientific manner known to the art.

In this connection respondent would show to your Honors that Ducktown basin is a place peculiarly adapted to the mining and smelting of copper ores; it is a community where for miles around the land is practically valueless for agricultural purposes, is almost sterile in its character and the timber is scrubby and unmerchantable, and in fact the only value to the lands in said entire Ducktown basin and surrounding territory, consists in the minerals contained therein, chiefly copper, and the only use to which the land can properly be put is the mining and reducing of such minerals. In fact no region in the world, so far as this respondent knows, is better adapted to the mining and smelting of copper ores, and less susceptible to general damage from gases therefrom, than the aforesaid

Ducktown basin. And therefore while it is denied that any damage whatever is being done to either the plaintiff or any of her citizens, either in person or property, it is respectfully shown to the court that even if said damage were done while skillfully and scientifically treating the ores, that the damage would be slight and susceptible of accurate approximation.

Eighth.

Respondent will show further that prior to the beginning of mining and smelting of copper ores by it, and its co-respondent, the Ducktown basin where the damage is now alleged to be accruing, was practically uninhabitated and a barren region and that in the year 1890 during what is locally termed the "Period of Suspension," being just before active work was resumed, there were living in said entire basin of some eight to ten or more miles in diameter, only two hundred and twenty-two (222) human beings, men, women and children, who eked out a bare existence from the soil therein. The destitution was so great that the people had to walk away from the region in order that they might earn money with which to pay taxes and to buy the bare necessities of life. But since the beginning of said copper operations by it and its co-defendant, there has been an influx of population into said district un[illegible] now there is within the immediate neighborhood of the works of this respondent a thriving, contented community of from ten to fifteen thousand people wholly dependent upon the continued operation of the copper industry for their livelihood; thousands of houses have been built; thousands of homes created; immense sums of money have been spent, not only by defendants in this case but by those indirectly interested in said works either as laborers or otherwise. This respondent alone pays monthly wages amounting to about Seventy Thousand ($70,000.00) Dollars per month, and in addition a larger amount of money for supplies, materials, freights, etc. The total number of men employed by this respondent and its co-respondent,

Ducktown Sulphur, Copper & Iron Company, being approximately three thousand men and the total pay roll of both companies being as this respondent believes in excess of $100,000.00 per month.

Respondent would show to the court that the granting of a preliminary restraining order in this case would not only have the effect to cause this respondent to lose all the profits which would have accrued to it during the pendency of the restraining order, in case your Honors shall eventually hold the complainants not entitled to the relief sought, but said entire population will be forced to abandon their homes and abandon the community, and the entire organization of respondent would be broken up and disbanded, and where now is a healthy, happy and prosperous community would be left but the ruins of the abandoned towns, so that an irreparable injury would be done not only to the respondent but to the large community of people indirectly interested in the continued operation of said works. Whereas, on the other hand, even if plaintiff is entitled to the relief sought in her bill, which is denied, the refusal of the preliminary restraining order in this case would be a matter of small consequence to it.

Ninth.

Respondent again denies that the fumes from its works are doing any damage whatever at the present time to either the plaintiff or to any of her citizens, to the tax values, to the roads or streams within the State of Georgia, to the health of the citizens of Georgia or to the property of the citizens of Georgia, and in this connection will show to your Honors that the State of Georgia is estopped both in law and in equity to ask the relief now sought for the reason that she has stood by without protest during all of these years and allowed respondent to continue to invest its money, and in fact to invest millions of dollars in the erection of its plants and houses for its employes, and respondent respectfully submits that it would

now be inequitable to allow the plaintiff, after acquiescing in and encouraging this investment on the part of both defendants, to seek the injunctive relief asked for, especially when both the plaintiff and her citizens have full, adequate and complete remedy at law.

And now having answered the Rule, it begs to file in support of this answer the following affidavits, which, having been printed, are referred to by page of the printed record.

The affidavit of Charles M. Seymour, Printed Record, p. 1.

The affidavit of F. M. Doyle, et al, Printed Record, p. 19.

The affidavit of H. A. Rogers, Printed Record, p. 21.

The affidavit of J. M. Daves, Printed Record, p. 24.

The affidavit of C. A. Weller, Printed Record, p. 26-134.

The affidavit of W. H. McCay, Printed Record, p. 29.

The affidavit of J. J. Wehunt, Printed Record, p. 30.

The affidavit of Jos. Hyde Pratt, Printed Record, p. 31.

The affidavit of M. J. Webb, Printed Record, p. 34.

The affidavit of T. S. McKinney, Printed Record, p. 42.

The affidavit Citizens Fannin Co., Georgia, Printed Record, p. 46.

The affidavit citizens Gilmer Co., Georgia, Printed Record, p. 50.

The affidavit citizens Towns Co., Georgia, Printed Record, p. 52.

The affidavit citizens Union Co., Georgia, Printed Record, p. 53.

The affidavit citizens Murray Co., Georgia, Printed Record, p. 55.

The affidavit of C. A. Hensley, Printed Record, p. 57.

The affidavit of George Cromwell, Printed Record, p. 62.

The affidavit of R. R. Maphet, Printed Record, p. 64.

The affidavit of Otto R. Jaecker, Printed Record, p. 66.

The affidavit of W. R. Rust, Printed Record, p. 69.

The affidavit of John Menzies, Printed Record, p. 71.

The affidavit of G. C. Parks and M. T. Fouts, Printed Record, p. 73.

The affidavit of G. G. Hyatt, Printed Record, p. 89.

The affidavit of several hundred citizens of Ducktown, Printed Record, pp. 81-98.

The affidavit of J. L. Center, Printed Record, p. 103.

The affidavit of Samuel Spargo, et al, Printed Record, p. 105.

The affidavit of F. M. Kimsey, Printed Record, p. 108.

The affidavit of W. I. Morris, et al, Printed Record, p. 109.

The affidavit H. E. Center, Printed Record, p. 112.

The affidavit of M. T. Dooley, Printed Record, p. 114.

The affidavit of Randolph Adams, Printed Record, p. 124.

The affidavit of C. H. Glasser, Printed Record, p. 132.

The affidavit of R. S. Wetmore, Printed Record, p. 136.

The affidavit of H. Cornick, Printed Record, p. 137.

The affidavit of J. Parke Channing, Printed Record, p. 141.

The affidavit of B. E. Fernow, Printed Record, p. 153.

The affidavit of C. A. Schenck, Printed Record, p. 167.

The affidavit of A. H. Case, Printed Record, p. 173.

And now having fully answered unto said Rule, respondent prays to be discharged therefrom and that the restraining order asked for be denied.

TENNESSEE COPPER COMPANY,

By J. Parke Channing **President.**

HOWARD CORNICK,
JOHN H. FRANTZ,
Solicitors.

MARTIN H. VOGEL,
Of Counsel.

STATE OF NEW YORK, }
County of New York, } *ss.*

J. Parke Channing makes oath in due form of law that he is the president of the defendant, Tennessee Copper Company; that he has read the foregoing answer and knows the contents of the same, and that the same is true of his own knowledge except as to those matters stated therein upon information and belief, and these he believes to be true.

J. Parke Channing

Sworn to and subscribed before me this the 21st day of April, A. D., 1906.

Albert W. Brown

Notary Public State of New York, County of New York.

FILE COPY.

Office Supreme Court U. S.
FILED
APR 25 1906
JAMES H. MCKENNEY,

Orig'l. No. 5 Orig.

O. T. ~~1906~~ O. T. 1907

IN THE

Supreme Court of the United States

October Term, 1906

No. 5 ORIGINAL CAUSE
IN EQUITY

THE STATE OF GEORGIA, BY ITS ATTORNEY GENERAL, JOHN C. HART, Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY, AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY, LIMITED, Defendants.

SUPPLEMENTAL AFFIDAVIT OF J. PARKE CHANNING, SUBMITTED BY LEAVE OF COURT.

MARTIN H. VOGEL,
Of Counsel

HOWARD CORNICK,
JOHN H. FRANTZ,
Attorneys for Tennessee Copper Company.

Geo. E. Howard, Pr., Wash.

Supplemental Affidavit of J. Parke Channing

IN THE

SUPREME COURT OF THE UNITED STATES

October Term, 1905.

No. 13. ORIGINAL CAUSE IN EQUITY

THE STATE OF GEORGIA, BY ITS ATTORNEY GENERAL, JOHN C. HART, Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY, AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY, LIMITED, Defendants.

DISTRICT OF COLUMBIA, S.S.

Personally appeared before me the undersigned, a notary in, and for the District of Columbia, J. Parke Channing, who being first duly sworn, upon his oath did say:

That he is the President of the Tennessee Copper Company and that being a technically educated engineer, he has personally directed all the operations of the company; that in its early stages the method of treating the ore was to first roast it in large heaps in the open air, driving off most of the sulphur and to then smelt the residue in blast furnaces producing a high grade matte in one operation. That with the three furnaces which the company then had the daily capacity was about 1200 tons.

Later on, as is shown in the numerous affidavits connected with

this case, improvements in the art demonstrated that it was possible to smelt this ore direct in the blast furnaces without any previous roasting so as to obtain a low grade matte. This low grade matte was then re-smelted in a similar furnace and high grade matte produced. It was found that with two furnaces running on raw or unroasted ore it was necessary to keep the third furnace concentrating this low grade matte up to a high grade matte and in addition to this it was noted that the furnace ran much slower on raw ore than on roasted ore. The result was that the net capacity of the three furnaces was reduced from 1200 tons of ore per day to 800 tons of ore per day. Having this tonnage reduction in view and taking into consideration the developments in the mines it was concluded to add to the plant four more furnaces but only three more blowing engines, the idea being to keep six furnaces in continuous operation, thus having one spare furnace always out of commission and being put into repair. At the present time there are six furnaces, or the maximum, in operation and they are capable of treating from 1600 to 1800 tons of ore per day.

For the purpose of disposing of the gases of all these furnaces the new smokestack 20 feet in diameter and 325 feet high was built, it being calculated that this stack was sufficiently large and high to dispose of all the gases from over 2000 tons of ore per day. This stack was not put into commission until about the 1st day of April, 1906, so that today it has only been in operation slightly over three weeks and in the opinion of the affiant it will be necessary to operate this stack for at least five or six months, and during the present coming summer season so as to thoroughly demonstrate its efficacy, although from the reports received of the operation of the stack, it is meeting with the fullest expectations had when it was planned.

From the very beginning of the operation of the Tennessee Copper Company, the affiant has always had in view the possibility of utilizing the waste gases from the operation of the plant and its conversion into merchantable sulphuric acid. During the time that the heap roasting method was in operation the major portion of the sulphur was driven off in the roast yards where it obviously could not be collected and that portion driven off in the

blast furnaces, smelting the roasted ore, was in such an attenuated form that any hope of its recovery was futile. As soon, however, as the direct smelting of the ore in the blast furnaces became an accomplished fact, it was observed, as had been expected that the gases were much richer in sulphur than in the old method because all of the sulphur was being emitted from the furnaces, and tests and experiments were immediately begun, have been continued, and are now being carried on today, so as to determine whether it is technically possible to produce commercial sulphuric acid from the furnace gases.

The article referred to in the affidavit of Mr. Shippen was written about 18 months ago for the Engineering and Mining Journal, a technical paper, and was one of a series of articles contributed by copper smeltermen in the United States, Mexico and Canada and while the statements contained therein are technically and scientifically true, still the practical demonstration is yet experimental and the affiant has not yet demonstrated that the production of sulphuric acid at the works of the Tennessee Copper Company would prove either a possibility or a commercial success, or that he would be able to dispose of even a portion much less all of the sulphuric acid which might be produced from the treatment of these ores. He is still experimenting and investigating this matter and the problem turns out to be an extremely complex one, involving the question of freight rates on all of the railroads of the South; of the competition of sulphur ore from Spain, Sicily, Louisiana, and the various pyrite mines of the southern states. It involves the careful investigation of the plants at present engaged in the manfacture of sulphuric acid, and not least of all, the ultimate capacity of the South to absorb and utilize a product of this kind.

The affiant is personally conversant with all of the copper smelting plants in the United States, Canada and Mexico, and states from his own knowledge that at the present day not one of such works is producing commercial sulphuric acid even in small or limited quantities and that while affiant hopes and believes that in the future it will be possible to utilize a part at least of the material now being wasted, that it has never yet been practically demonstrated.

Affiant further states that the usual sulphur ore from Spain contains 50 per cent. of sulphur, that from the southern pyrite mines 45 per cent. of sulphur, and that from Sicily and Louisiana 99 per cent. of sulphur, whereas the ore from the mines of the Tennessee Copper Company will not carry to exceed 30 per cent. of sulphur, and that even should a chamber plant be built to utilize a portion of the gases from the furnaces, it would still be in the nature of a huge experiment.

Therefore, as is shown in the various affidavits in this case, he caused to be erected the tall stack and large flue now built and in operation. This was done at a large expense and is in keeping with the latest and most approved practice in the smelting of copper ores containing sulphur.

J. PARKE CHANNING.

Subscribed and sworn to before be this 24th day of April, 1906.

ALEXANDER H. GALT,
[Seal.] Notary Public District of Columbia.

O. T. 1907

O. T. 19

FILE COPY.

IN THE

Supreme Court of the United States

October Term, 1906

Office Supreme Court U. S.
FILED
APR 23 1906
JAMES H. MCKENNEY,

No. 5 ORIGINAL CAUSE
IN EQUITY.

THE STATE OF GEORGIA, BY ITS ATTORNEY GENERAL, JOHN C. HART, Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY, AND THE DUCKTOWN SULPHUR, COPPER & IRON COMPANY (LIMITED), Defendants.

BRIEF AND ARGUMENT OF THE TENNESSEE COPPER COMPANY IN RESISTANCE TO THE MOTION FOR RESTRAINING ORDER.

HOWARD CORNICK,
JOHN H. FRANTZ,
Attorneys for Tennessee Copper Co.

MARTIN H. VOGEL,
Of Counsel.

R. H. REYNOLDS & CO., PRINTERS

IN THE

Supreme Court of the United States

October Term, 1905.

No. 13. ORIGINAL CAUSE
IN EQUITY

THE STATE OF GEORGIA, BY ITS ATTORNEY GENERAL, JOHN C. HART, Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY, AND THE DUCKTOWN SULPHUR, COPPER & IRON COMPANY (LIMITED), Defendants.

BRIEF AND ARGUMENT OF THE TENNESSEE COPPER COMPANY IN RESISTANCE TO THE MOTION FOR RESTRAINING ORDER.

May it please your Honors:

In response to the rule to show cause why the restraining order should not be granted, which rule was made returnable to December 4th, 1905, and has, by stipulation, been continued to this date, the defendant, The Tennessee Copper Company, has filed herein a large amount of proof in the shape of affidavits meeting and fully denying every allegation of the bill, and makes the following statement of its case:

THE PLEADINGS.

The original bill in this cause was filed by the State of Georgia, as plaintiff, against the Tennessee Copper Company, a corporation organized under the laws of the State of New Jersey, resident of the State of Tennessee under the laws of the State of Tennessee, and against the Ducktown Sulphur, Copper & Iron Company (Limited), a corporation under the laws of Great Britain, likewise domiciled in the State of Tennessee under the laws thereof.

It is charged in the bill that these two defendants own and are operating certain mines, smelters and furnaces at or near Ducktown, in Polk County, Tennessee, adjacent to the state line between the States of Tennessee and Georgia, and just across the state line from Fannin County, Georgia; that the fumes, smoke and gases from the smelter operations of the two defendants, arising into the atmosphere, are blown by the air currents across the state line from Tennessee into the State of Georgia, and that vegetation is killed or injured by these fumes and gases. The bill alleges that the effects of the fumes and gases have extended over a large territory around Ducktown, Tennessee, in Georgia, the allegation being that the radius of the territory affected is fifty miles or more; and that property within the counties of Murray, Gilmer, Fannin, Union and Towns, in the State of Georgia, has been injured.

For convenience in presentation we have separated the particular allegations contained in the bill, based upon which the State of Georgia seeks to obtain the relief prayed in this cause, into the following:

ALLEGATIONS OF THE BILL.

1. That the State of Georgia is the original and ultimate prporietor and owner of all lands within its jurisdiction, in-

cluding those in the counties of Murray, Gilmer, Fannin, Union and Towns.

(Bill, Par. 2nd.)

2. That the operations of defendants have reduced the taxable value of property within the counties above named, and hence have directly reduced the income and revenue of the State of Georgia.

(Bill, Par. 13th.)

3. That the health of the citizens of the State of Georgia has been impaired, and will be still further seriously injured and impaired by a continuance of the operations of the defendants.

(Bill, Par. 14th.)

4. That the fumes and gases injuring the vegetation have an indirect influence upon the precipitation and retention of moisture to such extent that the streams within the State of Georgia are injured.

(Bill, Par. 8th.)

5. That the State of Georgia is the owner in fee of all public highways and roads within the boundaries of the State, and that the public highways and roads have been and are being injured and their usefulness impaired.

(Bill, Par. 11th.)

6. That the property of citizens of the State of Georgia has been and is being seriously injured within a radius of fifty miles in Georgia territory.

(Bill, Par. 5th.)

7. That the defendant Tennessee Copper Company has removed its plant from a point several miles within the State of Tennessee, to a point adjacent to the State line between Ten-

nessee and Georgia, thus extending the area of injury within the territory of the State of Georgia.

(Bill, Par. 21st.)

8. That the tall chimneys recently erected and now in use tend to spread the fumes over a wider area and thus increase the damages.

(Bill, Par. 23rd.)

9. That the defendant Tennessee Copper Company is engaged in the erection of new furnaces and appliances now almost ready for operation which will increase the volume of gases and fumes from that defendant's smelter plant to about double the quantity now issuing therefrom, and that such increased capacity will increase the alleged injury.

(Bill, Par. 22nd.)

The prayer of the bill is:

(1) For process;

(2) That a temporary injunction and restraining order be granted, prohibiting the defendant Tennessee Copper Company from in any wise operating, firing or using its four furnaces newly erected, or in course of erection, and that upon the final hearing said preliminary injunction be made perpetual; and

(3) For a perpetual injunction against each and both of the defendants, commanding them to absolutely desist and refrain from using, managing, maintaining, or in any manner operating any furnaces or other appliances giving off or discharging any foul or dense smoke or injurious gases upon the territory or lands of plaintiff and its citizens.

Upon motion the bill was permitted filed in this cause on October 23rd, 1905, subpoena was awarded, returnable January 15th, 1906, and a rule upon defendants entered to show cause why the restraining order should not be granted.

The order of your Honors is in the following words:

"No. 13 Original. State of Georgia, complainant, "vs. Tennessee Copper Co. et al. Granted motion for "leave to file bill of complaint; subpoena awarded, "returnable January 15th, 1906, and rule to show "cause why restraining order should not be granted "entered, returnably December 4th, next."

On November 27th, 1905, the defendant, the Tennessee Copper Company, filed its demurrer to the bill, together with brief in support of same, and said demurrer was likewise set for hearing upon December 4th, 1905. When said cause came on for hearing on December 4th, 1905, it was by stipulation filed by leave of your Honors continued indefinitely, with leave to either side to call it up after thirty days notice to the other. The reasons for said stipulation will be fully set out hereinafter. It is sufficient here to say that the **purpose of it was to give time for the completion and putting into operation of the new furnaces and high stack built in connection therewith which were then in process of construction by said defendant, and the use of which is now sought to be restrained.**

POSITIONS OF THE DEFENDANT.

Briefly stated, the case made on the part of this defendant upon the pleadings and affidavits herewith presented is as follows:

I.

The allegations of the bill are not sufficient to entitle plaintiff to the relief sought, because:

(a) No controversy is shown to exist between the State of Georgia and the defendant.

(b) The facts alleged are not sufficient to call for the exercise of the injunctive power of this Court.

(c) Plaintiff hath a full, adequate and complete remedy at law.

II.

The bill is filed upon totally erroneous conclusions both of law and of fact.

(a) The basis of the complaint is that the high stack or chimney agreed to be built by the Tennessee Copper Company, had been completed and was causing great damage; whereas it now conclusively appears that the said stack had never been completed and put into operation at the time this suit was brought.

(b) It is alleged that the plant of this defendant has been removed to a point several miles nearer the line between Tennessee and Georgia than it formely was; whereas the facts developed show conclusively that this is an error and that the said plant has never been removed.

(c) The bill alleges that taxes and taxable values have been materially reduced in the counties named therein; whereas it conclusively appears that not only have these taxes and taxable values not been reduced, but the same have been materially increased during the period referred to in the bill.

(d) The bill alleges that the health of the citizens of the State of Georgia in the territory referred to, has been injuriously affected; whereas it appears conclusively from the proof that there has been no injurious effect whatever upon the health of the citizens of Georgia caused by the operations of said plants.

(e) The bill alleges that the public roads of the State of Georgia are being injured by said fumes; whereas the proof conclusively shows that no damage or injury whatever has been done or is being done to said roads by smoke and gases from said plant.

(f) It is alleged that the streams and water courses of the State of Georgia are being injuriously affected by said smoke and gases; whereas it conclusively appears from the proof that no damage whatever is being done to said streams and water courses by smoke or gases from these plants.

(g) It is alleged in said bill that the property belonging to citizens of Georgia in the territory referred to is being injured; whereas it appears from the proof that although possibly in the past some slight injury may have been done to the property of these citizens by fumes and gases from said plant, that at the present time no injury is being done to said property.

III.

The State of Georgia is estopped both in law and in equity to seek injunctive relief in this cause:

(a) By her laches.

(b) By her long acquiescence in the operations she now seeks to enjoin.

(c) By her consent, agreement to, and insistence upon the adoption of the present method of pyrite smelting and the high stack erected in connection therewith and lately put into operation.

IV.

The State of Georgia shows no such state of facts as to entitle her to the relief sought.

(a) An injunction in a case of this kind is never a matter of right but of grace and within the orderly discretion of a court of equity.

(b) Manifestly an injunction would in its far-reaching effects operate oppressively and would produce greater injury on the one side than its refusal would on the other, even if damage is being done by these fumes, which is denied.

(c) Plaintiff and those whom it has assumed to represent have a full, adequate and complete remedy at law, and the damages, if any, are in their nature susceptible of accurate approximation.

All of the foregoing defenses will be discussed more fully and in detail hereinafter in this brief.

HISTORY OF COPPER OPERATIONS IN DUCKTOWN BASIN.

Before proceeding with a detailed discussion of the case we believe it would be profitable to give a short sketch of the history of copper operations in this basin.

Mr. G. G. Hyatt, in his affidavit (printed record, page 89), says:

> "Copper was discovered in the Ducktown district about the year 1849. Operations for copper were begun in 1850, and were carried on continuously with a slight intermission during the civil war until about 1879. During the period of operation hundreds of people were directly dependent upon the workings of the copper mines. The operations had been carried on by Capt. J. E. Raht, who was later succeeded by E. G. Duvall, who for the Union Consolidated Mining Co. continued operations until the year 1878, when that company suspended operations and went into the hands of a receiver, who continued the operations during the year 1879, and then ceased. Operations were begun by the Ducktown Sulphur, Copper & Iron Company (Limited) about the year 1891. The Pittsburg & Tennessee Copper Company began its operations about the year 1892, and continued until it was succeeded by the Tennessee Copper Company in 1899, which company, together with the Ducktown Sulphur, Copper & Iron Company, Limited, have been continuously operating until the present day.
>
> When the Union Consolidated Mining Company suspended operations in 1879 there ensued one of the darkest periods ever known to the people of the adjacent territory, both in Georgia and Tennessee. Hundreds of people at that time had purchased homes, some of which had been paid for, and some of which were being paid for. When the mines were suspended there was no sort of employment for labor nearer than

Ridge Valley, Ga., Soddy, Tennessee, and Dayton, Tennessee, the nearest point being sixty miles away, and hundreds of people at the time being unable to get conveyances were forced to take their wives and children and walk through the country, seeking employment, taking with them such personal effects as they could carry upon their backs. Hundreds of homes, which had been partly paid for, were lost. Hundreds of valuable residences and other buildings rotted down and went to waste. Furnaces, smelter plants and factories decayed and fell down, leaving their dismantled ruins as monuments of the desolation and destruction of a once thriving community. The period from 1879 to 1890 is now known and spoken of throughout the territory adjacent to these copper operations as 'the period of suspension,' and it is remembered and referred to by the inhabitants as a time when want and suffering were common to all the people. During that period there was no employment near Ducktown by which the people could earn money, or by which the community could be supported. Practically, the only money current among the people was the money paid to such of the inhabitants as drew pensions from the Federal Government.

The land being poor and sterile, and not being adapted to agricultural purposes, the majority of the inhabitants remaining were unable to raise enough crops to provide themselves with food and forage for the winter, and those of the inhabitants whose land was capable of raising a crop found no market where their products could be sold for money. The majority of the inhabitants would make what is known in the mountains as a 'one steer crop,' that is such crop as could be made with the assistance of one steer, grazing their steers upon the commons at the time, and after harvesting such crops as they could make would prepare food enough to last them through their journey, and leaving the country on foot would walk to Ridge Valley, Ga., Soddy, Tenn., or Dayton, Tenn.,

seeking employment in order that they might make enough money to pay their taxes and to meet such other little money obligations as had been incurred in the purchase of coffee, sugar and clothing for themselves and their families.

When the Ducktown Sulphur, Copper & Iron Company, Limited, commenced preparations for operations in the year 1890 the news became noised about among the inhabitants of the territory adjacent to the mining region, and was hailed with joy by all the people. To these people it meant the return of the days of prosperity, and from all the mountain regions for miles people flocked into Ducktown, seeking employment until there has now grown up a thriving, prosperous, contented community where labor may find employment, where work is abundant and where want is unknown. To this affiant's knowledge there are no people in that community who are, or who need be, in the destitute condition which is usually found in other communities of its size. The Tennessee Copper Company and the Ducktown Sulphur, Copper & Iron Company, Limited, together pay about half of the taxes of Polk County, Tennessee. The schools, which prior to the year 1890 practically did not exist, have been greatly benefited and have been placed on a sound and safe basis. The children are receiving education which under the old regime was impossible. The roads are better than they have ever been, and a general condition of prosperity prevails.

Affiant was Census Enumerator for the 7th, 8th and 10th Civil Districts of Polk County, Tennessee for the Census of 1890, and as such Census Enumerator made up the figures for the Census of 1890. At that time there were in the entire mining region only 202 people, men, women and children. There are now, as this affiant is informed and believes, employed by the Tennessee Copper Company and the Ducktown Sul-

> phur, Copper & Iron Company, Limited, jointly about 2,500 men, and there is in the Ducktown basin, dependant almost entirely upon the copper operations, a population of approximately twelve thousand people."

This is fully borne out by affidavit of Capt. C. L. Hensley, printed record page 57.

The foregoing with further detailed history of subsequent operations of the copper companies is found in the affidavit of J. Parke Channing, printed record page 141.

As appears from the foregoing affidavits, together with other proof in the record, these operations have been proceeding almost continuously for some forty or fifty years, but not until the year 1890 were they begun on anything like as large a scale as now; but since that period these copper operations have been going on in this community continuously by this defendant and its co-defendant and the predecessor of this defendant. Large sums of money have been continually invested, and where was once practically a sterile and uninhabited community has now been built a great and thriving town with something like ten to twelve thousand people, wholly dependent upon these industries for a means of subsistence.

BRIEF AND ARGUMENT.

The allegations of the bill are not sufficient to entitle plaintiff to the relief sought.

For a full discussion of the defenses on the foregoing point, we refer to the brief filed in this cause on October 27th, 1905, in support of the defendant's demurrer to the bill, and also to the authorities hereinafter discussed upon the question as to whether a case is made out upon which a court of equity will grant this extraordinary writ.

ALLEGATIONS OF BILL AND RESPONSE.

Original and Ultimate Ownership.

The bill alleges that the State of Georgia is the original and ultimate proprietor and owner of all lands within its jurisdiction, including those within the counties of Gilmer, Murray, Fannin, Union and Towns, from which last named it derives a considerable portion of its income and public revenue, **(Bill, Par. 2nd)**; and that the value of said lands, and particularly in the counties above named, has been greatly decreased by the smoke and gases from the operations of defendants.

It is respectfully insisted that the fact that the State of Georgia was the original owner of the land within its boundaries and that in the event of lapse of title it will become the ultimate owner of those lands is not sufficient to make the State a proper party plaintiff, nor to constitute a controversy within the meaning of the constitution, nor to entitle it to the relief prayed. The interest of the plaintiff in the property of its citizens is remote and is purely contingent upon title becoming vested in itself by the law of escheat.

On the same theory the State of Georgia could prevent its own citizens from removing the timber from their land, or the minerals from the earth. Clearly the State's ultimate ownership interest is too remote to entitle it to such relief. **But it is not true, as is clearly shown by the proof introduced, that the values of these lands in question are being reduced.**

See affidavit Chas. M. Seymour, printed record p. 1.

Reduction of Taxable Values.

It is alleged in the bill that the income and public revenue of the plaintiff has been seriously interfered with and lessened by the operations complained of. **The proof submitted shows conclusively that this statement is erroneous. Mr. Chas. M. Seymour, in his affidavit, printed record page 1, says:**

"From the table (embodied in the affidavit) it appears that there was a uniform decrease of taxes in said counties in the aggregate from the year 1891 to the year 1897, and that from 1897 to 1905 the increase has been almost uniform. In the Fannin County statement for 1905 it appears that there was a loss in taxable value amounting to $60,897. * * * * * * Thereupon examination was made to ascertain the cause of this loss, and it was found that for 1904 the taxes of Beebee & Sons Tannery Co. were returned in Mineral Bluff District at $127,250. Said Tannery Co. finding that their taxes should have been returned in Toccoa District instead of Mineral Bluff District, and believing its tax valuation to be too high, filed protest with the proper officials, and after arbitration the value of its whole property was fixed for the year 1905 at $16,690, making a difference of $110,560 for that year in that district. * * *

So that instead of there being a decrease in Fannin County taxable value for the year 1905 of $60,897, as shown by the statement of the Comptroller General, there was a positive increase of $49,663 in tax valuation of the whole county in order to overcome the reduction of the $110,560 obtained by the Tannery Company."

Upon examination it was found that the property of the Tannery Company thereafter sold for $115,000, so that there was no depreciation in fact.

The decrease from 1891 to 1897 (which was prior to the operations of this defendant) was undoubtedly due to the general depressed financial conditions existing throughout the entire country, and particularly throughout the South during that period.

Mr. Seymour, in his affidavit, states that he has made examination of the tax returns of those districts of Fannin County lying nearest to the copper operations, and therefore likely to

be most seriously injured. He prepared a table of tax returns for those districts which shows the fact that the taxes have uniformly increased in those districts since the year 1895. His table of increase of valuation of the counties is borne out by copies of the tax returns certified by the Comptroller General of the State of Georgia and filed as exhibits "A," "B," "C," "D" and "E" to his affidavit; and his table of increase of the districts of Fannin County is borne out by the certified copies of the tax returns of those districts, filed as exhibits "D" to "L" inclusive to his affidavit.

This increase is further shown, particularly as to Fannin County, Georgia, by the United States Census Reports for 1880, 1890 and 1900, which show the following figures:

Fannin County, Georgia.

Population in 1880	7,425
Population in 1890	8,724
Population in 1900	11,214

Agriculture, Live Stock, Farm Improvements.

	1900	1890	1880
Land and improvements including buildings	$623,080	$483,130	$345,113
Implements and machinery	25,870	18,150	18,930
Live stock	184,831	149,670	110,324
Farm products	275,632	182,140	142,630

We respectfully refer also to the following affidavits:

M. J. Webb, Mayor of Ellijay, Ga., Printed record, p. 34.

Capt. C. L. Hensley, Printed record p. 57.

T. S. McKinney, Printed record p. 42.

We therefore submit that the allegations of the bill with respect to the decrease of values are not borne out by the exist-

ing facts. But, on the contrary, even those districts nearest the copper operations, and hence most subjected to the influences complained of, have steadily increased in valuation.

Health.

The bill alleges that the health of the citizens in the locality alleged to have been injured has been seriously impaired and that it will be further seriously injured and impaired.

It will be noted that in the exhibits to the bill, which are composed of various communications, resolutions, correspondence and reports of committees, not one word is said about injury to health of citizens. The various committees appointed by the Legislature of Georgia to make an investigation upon which this suit was authorized, made no such report. The letter of complaint from the Governor of Georgia to the Governor of Tennessee makes no such complaint, and in fact in none of the exhibits is there any statement of injury to health, and **it is upon these exhibits and the information therein contained that the suit was authorized and the suit is based.**

Moreover, it clearly appears from the proof offered that the facts existing do not warrant the allegations of the bill. It clearly appears from the affidavits of a large number of physicians practicing in this immediate locality that there is no injury to health by reason of sulphur fumes.

Dr. J. M. Daves, a resident of Blue Ridge, Fannin County, Georgia, in his affidavit filed herein, states that the gases from the copper operations at Ducktown are not deleterious to the health of the people of Fannin County, but that on the contrary the health of the people of Fannin County is as good now as it ever has been. Fannin County is the county in Georgia immediately adjacent to the copper works, and where injury would naturally occur, if any occurred at all.

See affidavit Dr. J. M. Daves, Printed Record p. 24.

Dr. H. A. Rogers, who has been a practicing physician and surgeon in the Ducktown mining region during the greater part of the time since 1878 and during all of the time that the mines have been in operation since 1878, stated that the sulphur gases emitted from the works of the defendant are not only not injurious to the health of the inhabitants in any instances, but stated that in many instances they are positively beneficial.

See affidavit of Dr. H. A. Rogers, Printed Rec., p. 21.

The same statements are made in the affidavits of **Dr. B. M. Doyle, Dr. A. W. Lewis, Dr. E. M. Akins, Dr. J. B. Bearden, Dr. J. J. Barnes, Dr. W. V. Garrett, Dr. L. E. Kimsey** and **Dr. R. L. Hyder,** all of whom are practicing physicians in the immediate vicinity of these copper works and have been practicing physicians in this vicinity for a number of years and are in the best position to know the facts.

See affidavit Dr. B. M. Doyle et als., Printed Record, p. 19.

That the health of the citizens in this locality is in no wise injured or impaired in the slightest degree is also shown by the affidavit of **T. S. McKinney, Printed Record, p. 42.**

The affidavits of 24 citizens of Murray County, Ga., Printed Record, p. 55.

The affidavits of 47 citizens of Union County, Ga., Printed Record, p. 53.

By the affidavits of 12 citizens of Towns County, Ga., Printed Record, p. 52.

By the affidavits of 17 citizens of Gilmer County, Ga., Printed Record, p. 50.

By the affidavits of 124 citizens of Fannin County, Georgia, Printed Record, p. 46.

By the affidavits of several hundred miscellaneous citizens

and residents in the vicinity of Ducktown, Printed Record, pp. 81-96.

The affidavit of M. J. Webb, Mayor of Ellijay, Ga., Printed Record, p. 34.

The affidavit of Capt. C. L. Hensley, Printed Record, p. 57.

We refer especially to the affidavit of Capt. Hensley upon this subject. He states that he is 76 years of age; that he has lived in this mining district at a point very close to the mining operations since 1866. He is now in perfect health; has brought up a family of seven sons and three daughters; has never paid a doctor's bill for himself and family, and never took a dose of medicine in his life.

We have no hesitancy in saying that we believe an inspection of the various affidavits produced by the defendants upon this question will be convincing that there are not now and never have been any injurious effects to the health of the citizens of Georgia by reason of the smoke and gases from these copper plants.

Streams.

The bill alleges that the streams of the State of Georgia are being injured by reason of the fact that the vegetation has been killed; the argument being that the vegetation has an indirect influence upon the precipitation and retention of moisture.

This allegation is thoroughly disproven by the affidavits of **C. A. Weller, Printed Record, pp. 26, 134.**

The affidavit of Joseph Hyde Pratt, Printed Record, p. 31.

The affidavit of Dr. B. E. Fernow, Printed Record, p. 153.

The affidavit of Dr. C. A. Schenck, Printed Record, p. 167.

The affidavits of citizens of Ducktown Basin, Printed Record, pp. 81, 98.

It is shown clearly in the foregoing affidavits, especially those of Joseph Hyde Pratt, C. A. Schenck and B. E. Fernow, that the clearing away of forest undergrowth which has had an effect upon the precipitation of moisture, **has been caused not by sulphur fumes but by forest fires which are allowed to burn without let or hindrance.**

Furthermore, as shown in the affidavit of Dr. Schenck, all of these streams, except one small stream draining about eight miles of this territory, are tributaries of the Hiwassee River of Tennessee, and not of any river or stream of Georgia.

Printed Record, p. 169.

High-ways.

It is alleged in the bill that the State of Georgia is the owner in fee of the highways and roads, and that these roads are being injured and their usefulness impaired by the sulphur smoke.

This is thoroughly disproven by the affidavits in this record.

See affidavit J. J. Wehunt, Printed Record, p. 30.
Affidavit W. H. McCay, Printed Record, p. 29.
Affidavit of Joseph Hyde Pratt, Printed Record, p. 31.
Affidavit of Chas. A. Weller, Printed Record, pp. 26, 134.
Affidavit of B. E. Fernow, Printed Record, p. 153.
Affidavit of C. A. Schenck, Printed Record, p. 167.
Affidavit of J. L. Center, Printed Record, p. 104.
Affidavit of S. J. Spargo, et als, Printed Record, p. 106.
Affidavit of W. I. Morris, et als, Printed Record, p. 110.
Affidavit H. E. Center, Printed Record, p. 113.

That the condition of the roads in this territory is in no wise to be ascribed to these copper works is conclusively

shown by the affidavit of **Joseph Hyde Pratt, Geologist, Printed Record, p. 33.**

The affidavit of Dr. B. E. Fernow, Printed Record, p. 153.

The affidavit of Dr. C. A. Schenck, Forester, Printed Record, p. 172.

Dr. Schenck thus concludes:

> "The change of drainage, as much as there be within the State of Georgia, is in no wise ascribable to the action of sulphur fumes but solely due to the action of forest fires and to clearings made to supply wood, charcoal, trucks, hay, etc."
>
> **Printed Record, p. 172.**

Injury to Property of Citizens.

It is alleged in the bill that the fumes from these works have been doing and are doing now considerable injury to the property of the citizens of Georgia.

While it seems inferable that in the past and before the adoption of the present method of smelting ores, some slight damage was done to property immediately adjacent to the state line between Tennessee and Georgia; on the other hand that said damage has entirely disappeared since the adoption of the new method of pyrite smelting, and particularly since the putting in operation of the new 325 foot stack is clearly shown by the following affidavits:

As to former damage the following:

Affidavit of M. J. Webb, Printed Record, p. 34.

Affidavit of T. S. McKinney, Printed Record, p. 42.

Affidavit of 124 citizens of Fannin County, Ga., Printed Record, p. 46.

Affidavit of 17 citizens of Gilmer County, Ga., Printed Record, p. 50.

Affidavit of 12 citizens of Towns County, Ga., Printed Record, p. 52.

Affidavit of 47 citizens of Union County, Ga., Printed Record, p. 53.

Affidavit of 24 citizens of Murray County, Ga., Printed Record, p. 55.

Affidavit of C. L. Hensley, Printed Record, p. 57.

As to present conditions the following:

Affidavit of several hundred citizens of Ducktown Basin, Printed Record, pp. 81, 98.

Affidavit of Parks and Fouts, Printed Record, p. 73.

Affidavit of G. G. Hyatt, Printed Record, p. 73.

Affidavit of J. L. Center, Printed Record, p. 103.

Affidavit of Samuel Spargo, Postmaster, et als, Printed Record, p. 105.

Affidavit of S. O. Welch, United States Deputy Marshal, Printed Record, p. 109.

Affidavit of H. E. Center, Printed Record, p. 112.

Affidavit of M. T. Dooley, Printed Record, p. 114.

Affidavit of R. S. Wetmore, Printed Record, p. 136.

Mr. R. S. Wetmore in his affidavit referred to above, shows that he is a traveling salesman; has traveled through this community for many years, and that the conditions are better and vegetation further advanced in the Ducktown Basin at the present time than he has ever known of before.

Printed Record, p. 136.

The witnesses Parks and Fouts, the former being chairman of the County Court of Polk County, Tennessee, and the latter a prominent citizen of said county, made an extensive

tour of the forests in the Appalachian regions for the purpose of determining whether the timber conditions in the vicinity of Ducktown, as to dead and dying timber, were any worse than in other places, and they find and report that these conditions of timber are the same elsewhere and in places far removed from these plants; where there could be no suspicion even of the presence of gases, the conditions are exactly the same as the conditions found in the communities where it is alleged that damage is being done; and that the damage to timber at other places and where it has the same general appearance is caused by various worms, insects, forest fires, etc., according to the best information obtainable.

Affidavit Parks and Fouts, Printed Record, pp. 73-81.

Reference is also especially made to affidavits of about four hundred citizens of this Ducktown Basin found in the **Printed Record, pp. 81-89, and 98-103.**

In this affidavit it is stated, referring to present conditions:

> "After the defendant companies abandoned the open heap roasting method and commenced the method of green ore smelting, the atmosphere was so cleared up and the damage done by the smoke was so minimized that vegetation took on a new growth and the inhabitants of the towns in the immediate vicinity of these works were able to have beautiful lawns and gardens, as productive as possible for gardens to be in a locality where the land is naturally so poor and unfit, even prior to the placing in operation of said high stack, for agricultural purposes, that the said damage was so small as to be almost unappreciable and to produce little or no complaints even in the immediate locality of the works."

Printed Record, p. 83.

With reference to the condition since the putting in operation of the high stack, they say:

> "But quite recently the Tennessee Copper Company completed its tall chimney or stack, above referred to, and turned said smoke through said tall chimney, since which time the same have been carried up to a great height in the air before being so thrown out, and at the present time in all conditions of the weather said fumes are so thoroughly diluted with the air before reaching the ground that we believe that absolutely no injury to animal or vegetable life can result even in the immediate vicinity of the smelters, the same being in our opinion rendered entirely harmless."
>
> **Printed Record, p. 83.**

All of these affidavits show that whereas in the past there was some injury by reason of the fumes to property in the immediate vicinity of defendants' works, that since the putting into operation of the new process of green ore or pyrite smelting this damage has been reduced to a minimum, and since the putting into operation of the new stack lately built by the Tennessee Copper Company that there have been absolutely no complaints from any citizens.

Reference is also especially made to the affidavit of Dr. C. A. Schenck which appears in the **Record, pp. 167-172.**

It will be noted that Dr. Schenck who is a Forester of eminent ability and national reputation, made his investigation in August and September, 1905, and prior to the time of the placing in operation of the present high stack. He shows that at that time the following conditions existed:

> "A." Within the State of Georgia and adjacent to the smelter works an area of 3½ square miles is treeless, extending one mile southward from the state line. I do not mean that this treeless condition is,

purely and simply, caused by sulphur fumes. On the contrary, it clearly appears from many stumps and the axe marks thereon that the trees were cut and removed by man; and my information is that the trees have been cut and removed for fuel, charcoal and other purposes.

"B." Adjoining the treeless zone to the east and west and extending southward to a point situated at 2½ miles from the state line, 6¾ square miles of land show discoloration of trees.

"C." Adjoining the horn-shape belt of land given under "B" to the east and west extending southward to a point situated at 11½ miles from the state line, 124 square miles of land show partial, irregular and more or less discernible discoloration of foliage. I do not mean that the trees showing discoloration have either been killed or permanently damaged. Discoloration is any unseasonable appearance of the foliage that may be brought about by any one of a number of causes (drought or frost, insects or fungi, forest fires, gases and fumes, external injuries.)

"D." Outside of the territory described under "A," "B," and "C," which territory is entirely situated within Fannin County, no visible and unnatural discoloration of the foliage could be detected, although our examination extended within the State of Georgia about 14 miles beyond zone "C" in every direction of the compass."

It will be remembered, however, that these copper works have been in operation to a greater or less extent for the last fifty years; that at the time the "open heap roasting" method was used which extended over the larger portion of said period, the principal fuel used was wood, and the treeless condition of this community immediately surrounding the copper works is due to the fact, as shown by Dr. Schenck, that this wood has been cut off many years ago and sold to these companies, or their predecessors, for use in these copper works.

He shows that he made a thorough examination extending over a month, and that the remotest point in the State of Georgia from these works at which he could find the slightest trace of even discoloration is eleven and a half miles from the works.

It will be noted in this connection that the only complaint that comes from citizens of Georgia, so far as the record in its present condition discloses, comes from a man by the name of Shippen who lives some thirty or forty miles away outside of the zone of possible injury. According not only to the testimony of Dr. Schenck but also to that of Dr. B. E. Fernow, this would be entirely out of the zone of possible injury or discoloration under any sort of conditions.

It further appears from the affidavit of **G. G. Hyatt, Record, p. 97,** that only four citizens of the State of Georgia have ever at any time made any claim of injuries received from the works of this defendant, and that these citizens had suits brought for damages which are either pending or have been disposed of.

Removal of Plant.

It is alleged in the bill that the Tennessee Copper Company has removed its plant from a point several miles within the State of Tennessee to a point immediately adjacent to the state line between Tennessee and Georgia.

This allegation is thoroughly disproven by the proof herewith submitted.

See affidavit J. Parke Channing, Printed Record, p. 148.

Affidavit Randolph Adams, Printed Record, p. 130.

Affidavit C. H. Glasser, Printed Record, p. 133.

Mr. Adams says in his affidavit:

"Affiant has been General Manager of the Ten-

nessee Copper Company since it first began the construction of its plant, and affiant states that the smelter location was originally made where it now stands and the smelter was there constructed and has there remained until this date and has never been removed."

Printed Record, p. 130.

Mr. Glasser, the Superintendent, says:

"The original construction of said smelter plant was begun at the same point as is now occupied by said smelter plant and that said smelter plant has remained at that point ever since the beginning of its original construction."

Printed Record, pp. 133-134.

Tall Chimneys.

The bill alleges that the Tennessee Copper Company has recently erected some tall chimneys, and that said tall chimneys tend to spread the fumes over a wider area and increase the damage.

That this statement is totally erroneous is conclusively shown by the record.

See affidavit of J. Parke Channing, Printed Record, p. 141.

Affidavit of Randolph Adams, Printed Record, p. 124.

Affidavit of C. H. Glasser, Printed Record, p. 132.

Affidavit of Otto R. Jaecker, Printed Record, p. 166.

Affidavit of Howard Cornick, Printed Record, p. 137.

Mr. Channing in his affidavit says:

"After the abandonment of the open heap roasting method, as aforesaid, and prior to the completion of this high stack above referred to, the smoke and gases emanating from the smelter plant of defendant copper company were carried through a temporary

stack or chimney one hundred and twenty feet in height. This stack was being used as a temporary method to do away with the open heap method while the new stack was being erected. This 120 foot stack was the one which was in operation after the abandonment of the open heap roasting and down to about 1st of April, 1906, about which time the said 325 foot stack was completed by the Tennessee Copper Company and placed in operation, and is the only stack now in use by said Tennessee Copper Company."

Printed Record, p. 144.

This statement is borne out by all of the other affidavits referred to, and in fact it is now admitted by the counsel for plaintiff that this statement of fact which is really the basis of the plaintiff's suit is totally erroneous.

It was understood by the officials of the State of Georgia that when this green ore or pyrite smelting was introduced, that a high stack would be put in operation to carry the smoke into the air and discharge it at a high point, and they assumed that this had been done, overlooking the fact that it would take a great length of time to accomplish it. As a matter of fact, not only had the stack not been completed and proven a failure as they alleged, but it had never been completed at all until about April 1st, 1906.

The Purpose and Effect of Tall Chimney.

The purpose of this tall chimney, as clearly appears from this record, was to minimize or entirely do away with all possible complaint by citizens of the State of Georgia and elsewhere, of damage either real or imaginary coming from these fumes, by carrying the gases up into the air to a high point and discharging them, to the end that they might be diluted by the atmosphere and rendered innocuous before reaching the

earth. To the end that this might be done scientifically, Mr. Channing, himself, a man of great learning on this question, consulted with the most eminent experts that he could command. He says:

> "In order that said high stack might be erected in the most approved and skillful manner, its erection was placed under the supervision of an expert who had received his training in the Royal Technical Institute of Chemnitz, Saxony, German Empire, who was fully familiar with the requirements and regulations of the Prussian and Saxony governments with reference to the erection of similar stacks, and said stack was thus erected under the supervision and after and upon calculations of said expert as stated by said expert in his affidavit which is in this record."
>
> **Printed Record, p. 147.**

He further says that a similar stack erected by the Orford Copper Works near New York, in the County of Richmond and on the waters of the Kill von Kull, entirely eliminated all similar complaints **(Printed Record, pp. 150-151)**, and says:

> "Affiant further states that from a careful study of the conditions at the Tennessee Copper Company's plant and from his knowledge of the results achieved by tall stacks at copper plants in various portions of the world, as well as from the actual operations of the present stack he is of the opinion and firmly believes that the new 325 foot stack, now in use, will entirely prevent any ground for complaint of injurious effects from the gases produced in the smelting of the Tennessee Copper Company's ore."
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> **Printed Record, pp. 149-150.**

Mr. Otto R. Jaecker, the expert who erected this plant, says that he is a Civil Engineer, a citizen of Chemnitz, Saxony,

German Empire, and that he is acquainted with the requirements of the German and Saxony Governments with reference to similar stacks; that he made a chemical and physical test of the gases given off by the furnaces of the Tennessee Copper Company, and upon said test and the requirements of said Governments which are the most rigid and exacting, he made calculations as to the necessary height and character of chimney to be erected "in order to discharge the gases from the Tennessee Copper Company's smelting plant at such a height that they would be so diluted with the air that upon reaching the ground they would be incapable of doing any appreciable damage to animal or vegetable life;" that the stack was thus erected 325 feet high under his supervision and is now in operation, and from reports is "fulfilling to the greatest extent the calculations and expectations of this affiant made with the view of relieving any possible grounds for complaint."

Printed Record, pp. 66, 67 and 68.

This view is borne out by the affidavit of Mr. W. R. Rust, General Manager of the Tacoma Smelting Company, near Tacoma, Washington, who says that he had similar complaints of gases emanating from the works of this company until he erected a stack 300 feet high to carry them off, and continues:

> "Since the smoke has been going through this stack we have had no complaints whatever in regard to the smoke nuisance, and I believe that carrying the smoke to this height, it will scatter over such a large area, and will be diluted to such an extent that it will cause no appreciable damage to the surrounding vegetation."

Printed Record, p. 70.

It is further confirmed by the affidavit of Robert R. Maffett, Superintendent of the Orford Copper Company, which

is situated on the Jersey shores of the Kill von Kull. He states that he had similar complaints from various people as to the effect of gases emanating from this plant, and that he caused to be erected a 365 foot stack or chimney, in 1901. He says:

> "The effect has been that the smoke and gases delivered from the top of said stack are taken by the winds and so diluted with the air before they reach the earth that any injury or effect of the gas is imperceptible, and so far as this affiant is informed and believes there is no complaint in respect to any alleged injury from the present use of said tall stack."

Printed Record, p. 65.

It is also borne out by the affidavit of George Cromwell, president of the Borough of Richmond, State of New York, showing that prior to the erection of said high stack by the Orford Copper Company, there was considerable complaint of damage to vegetation as well as to navigation by reason of the smoke and gases from the said works, but that since the erection of said stack no complaint had ever been received from individuals of any damage being done.

Printed Record, pp. 62, 63 and 64.

It is further borne out by the affidavit of Dr. B. E. Fernow, one of the most eminent foresters and scientists in the world. He was for twelve years chief of the United States Division of Forestry, having acquired his training in the Prussian Forestry schools and departments, and all of his life has been engaged in forestry work. He says:

> "My conclusion is that the high chimney, placed as it is near the center of a wide open basis of six to ten miles diameter, and the fumes behaving as described, the gases will be diluted to a point of innocu-

ousness within short distances from the works and especially in the direction of the plaintiff's territory."

Printed Record, pp. 165-166.

He says that by actual experiments and measurements upon the grounds that these gases emanating from the top of this high stack, being very hot and light, and also being aided by the strong draft through the stack, ascend to a very high point above the ground, (from 600 to 1000 feet) before they begin to diffuse themselves in the atmosphere; and furthermore that the north winds which are necessary in order to carry the gases in the direction of Georgia are dry winds as distinguished from the damp winds which come from the south, and would carry the gases in the direction of Tennessee territory.

Reference is made to the affidavit of the said Dr. Fernow who has made a careful examination and inspection of this plant, and of the entire community, and who has made actual chemical experiments with the atmosphere, and is in the best possible position to give a correct opinion of the effect of this new stack.

From the foregoing brief statements and quotations from the record, together with references thereto, we think we are justifiable in the following statements.

That there is not now and never has been any injury to taxable values in the State of Georgia by reason of the operation of these defendants.

That there are not now and never have been any deleterious effects to the health of the citizens of the State of Georgia by reason of the operations of these plants.

That there is not now being done and never has been done any damage to streams in the State of Georgia by reason of

the fumes from these plants. On the contrary, any indirect injury which may have been done to these streams has been caused by forest fires, and by the clearing of these lands for agricultural purposes by the owners, or in order to sell the wood therefrom to these companies.

That there is not being done and never has been done any damage to the roads and highways of the State of Georgia. On the contrary, such indirect damage as has been done to said highways has been caused by the neglect of the counties to keep them in order, and also some washing caused by the destruction of the undergrowth by forest fires as above set out.

With reference to injury to property of citizens of the State of Georgia, it seems probable that some time in years gone by, some damage may have been done to property situated in the immediate vicinity of these works, but none of them complained even then and are not complaining now. On the contrary, as appears from the affidavit of M. T. Dooley **(Printed Record, p. 114)**, some three hundred citizens and property owners living in Georgia and in the immediate vicinity of these works, on February 3rd, 1906, called a mass meeting and unanimously passed resolutions memorializing the officials of the State of Georgia, protesting against the continuance of the present suit.

Printed Record, p. 114-123.

It is not shown and cannot be shown that any damage whatever is being done at the present time to the property of any citizens of Georgia by reason of the smoke and gases from these plants. On the contrary, several hundred citizens testify that in their judgment no such damage is now being done or will be done by the operations of this plant as it is now being operated.

There has been no removal of the plant, such as is set out in the bill.

The tall chimney complained of in the bill had never been erected at the time the bill was filed, but has been completed since the bill was filed and completed at the instance and request of the State of Georgia in order that its effect might be tested.

We think therefore that we are justified in saying as we do, **that the bill in this cause was undoubtedly filed upon totally erroneous conclusions of fact,** and that this unquestionably appears from the proof.

Erroneous theoretical conclusions of the plaintiff.

We think it shown by an examination of the argument and exhibits filed in support of the motion for preliminary restraining order, together with the affidavits herewith submitted, that the theoretical conclusions of plaintiff, as therein set forth, are erroneous.

It seems from those affidavits that the theory of the plaintiff is that the treeless condition in the vicinity of the plant is of recent origin. Quite to the contrary appears from the proof. Dr. Fernow says in his affidavit:

> "The surroundings of the smelter for an area of between three and four square miles have been deforested long ago. Having personally observed the stumps remaining, all of which show that they have been cut long ago, and being familiar with the history of the region as given by Mr. Heinrich, formerly manager of the Pittsburg and Tennessee Copper Company, with whom I had personal acquaintance, I know that this deforestation had been accomplished for the most part some twenty-five or thirty years ago, the wood having been used as charcoal in the roasting of the ores, and otherwise."
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> **Printed Record, p. 154.**

He further states:

"The mountain slopes facing the valley have also for the same purpose been culled of nearly all timber of value, and are either second growth, or present the ragged appearance usual to tracts of land lumbered in the slipshod manner of the country."

Printed Record, p. 154.

As to the behavior of the gases coming from the new stack lately put into operation, he says:

"To determine what under **present** conditions might be the likelihood of damage I have for four days observed and examined the works, and especially the behavior of the fumes emitted from the new chimney. My examination was favored by weather conditions inasmuch as each day showed differences of wind direction, wind velocity, and humidity, the last day being accompanied by heavy rain. Only during one day, the first, were the fumes thrown into the direction of the State of Georgia. In spite of the steady winds prevailing on this day, a great many variations occurred in the visible column of fumes, as the pictures taken under my direction shows; sometimes every few minutes a change occurred, but in one respect the cloud behaved almost invariably in a similar manner, namely, before traveling into the country it reached a much higher altitude than that of the mouth of the chimney (whose height is 325 feet above its foundation, 437.5 above water level). This altitude varying between 600 and 1,000 feet above river level is reached by vertical ascent when the air is calm as at night, and sometimes in the day time, or by a more or less rapid angle of ascent, the smallest having been computed at 8 degrees. Accordingly the final height is attained at varying distances from the

chimney, but usually within the first quarter mile. In other words, the point of distribution of the gases must be placed at an elevation of not less than 600 feet above ground, which is most important with reference to the dilution. Following the direction of the smoke column the cloud soon begins to spread out and upward, floating similar to coal smoke, sometimes visible to a height of 2,000 feet (estimated). The cloud becomes broadly diffused within a half mile, and at two or three miles from the source the visible portion has vanished."

Printed Record, pp. 159-160.

He then explains the differences of opinion of the authorities on the question of what percentage of the gas may be in the atmosphere without danger to plant or vegetable life:

"In strange contrast to the practical figures, which in the laws and regulations of European governments are prescribed as sufficient dilutions, is the statement of authorities (Schroeder and others), referred to by complainant, that one part in a hundred thousand inflicts great injury, and that even 1 in 1,000,000 is injurious. The strangeness vanishes if we investigate the basis for the assertion. It is based upon laboratory experiments which in no way, physically or chemically, represent conditions in the open air. These chemists overlook that the plant in these experiments is deprived of defense by the removal from the natural conditions of its functions; that sulphurous anhydrid in the nascent state, as employed in these experiments, is much more highly corrosive than the same substance under the conditions in which it is found in the fumes; and that much of the sulphur dioxide traveling through the air is changed into the less active trioxide. Moreover, it should not be overlooked that these experiments were made on the

most sensitive species of tree, such as does not exist at all in this region, namely, the Norway Spruce, and the results even if they were practically correct can by no means be applied to other species.

Stoeckhardt, who is the recognized first authority in this field and whose experiments laid the basis for all future experiments, found that deciduous trees, treated in a covered glass case, *i. e.*, under conditions unfavorable to the plant, with a mixture of 1 in 50,000 for weeks had no effect whatsoever, and even stronger mixtures (1 in 30,000 and 1 in 20,000) repeatedly applied, had no effect." * * * * *

He further says:

"The height of the chimney and the extra height produced by the draught will send the smoke into higher air currents and remove it from the influence of local topography in this open basin, *i. e.*, the fumes will progress through wider strata of air and will be more rapidly diffused."

Printed Record p. 165.

And so, we think that it is demonstrated as clearly as anything can be demonstrated without full and complete trial of the same, that no damage whatever is being done either to the plaintiff or to the property of her citizens by any gases from the works of these defendants at the present time.

Purpose of continuance.

Upon the application for restraining order, we deem it of importance to bring to the attention of the court the purpose of continuance of this motion. As fully shown above, the bill was filed upon the mistaken theory that the new stack in process of erection had long before been completed, and had been tried and had proven a failure.

When this condition was brought to the attention of the Attorney General of the State of Georga it was of course a matter of embarrassment to him. As stated by Mr. Cornick:

"I met Judge Hart, Attorney General for Geor-

gia, at his room at the New Willard Hotel on the day before the case was set for hearing, and gave him a copy of these affidavits. I called his attention to the fact that his bill was filed upon a totally erroneous state of facts in this, that the basis of his suit was that the new stack contemplated to be constructed as a part of the general scheme for green ore smelting had been completed and put in operation and had proved a failure, and in fact had increased the damage, whereas the fact was that this high stack had never been completed, that it had been planned and the contract let for its construction, but that owing to unforeseen troubles arising from labor conditions and otherwise that the new stack construction had proceeded no further than the partial erection of the large flue necessary to connect it with the furnace, and that the stack itself had been erected to a height of only about sixty-two feet above its base, the entire height of the proposed stack as planned being 325 feet above its foundation, which was 112.5 feet above water level of the river adjacent to the stack. I showed him photographs of the stack in the shape it then was, showing by red lines its proposed height when completed, and told him that the stack theretofore in use was simply a temporary stack, which was used to abridge over the time between the actual abandonment of the open heap roasting and the time when the entire new scheme would be put in effect at the completion of the new stack. He was very much surprised at this statement, said that he had been entirely misled in the matter, that his opinion was that the stack had heretofore long since been completed, and was in operation, and that the effect of its use was to largely increase the spread of damage. He said that under the circumstances he was placed in a very embarrassing position, and that he was not ready for trial, and asked that the matter be continued until some future date. He

said he had no intention in the world of trying to harrass these companies, and did not want to be put in the attitude of harassing them with this litigation, and certainly believed that they had had full opportunity to test the methods of operations adopted at the instance of the plaintiff) and it was thereupon suggested by me that the case be continued until later in the summer of 1906 to the end that it might be seen what effect, if any, the erection and placing in operation of the new stack might have. It was then explained to Judge Hart at that time that the four new furnaces in process of construction were a part of the general scheme, that they were being erected along with the new stack so that the smoke from them would be turned into the new stack upon their completion and placing in operation. It was thought at that time that the new stack would be completed and placed in operation by some time in January, 1906. Judge Hart stated that he did not want to make a definite continuance but that he would like an indefinite continuance to be had, providing that neither side might call up this case prior to January 15th, 1906, it being contemplated that said new stack and furnaces would be completed and in operation by that date, but after January 15th, 1906, that either side might call the case up for hearing upon 30 days written notice to the other."

Printed Record, pp. 138-140.

See also on this question affidavit of Mr. Channing, Printed Record, pp. 145-146.

It will thus be seen that having filed the bill upon an erroneous theory of fact, to-wit: that the new stack and furnaces in connection therewith had been completed, and that the stack was proving a failure, and having discovered that this state of facts did not exist, the case was continued in order that the stack might be completed and it with the furnaces

placed in operation; and now when the stack and furnaces have been completed at an expense of something like $150,000.00, it is sought by preliminary restraining order to enjoin the placing of the same into operation before the opportunity has been had to fully demonstrate their efficiency.

We think the mere statement of these facts about which there is and can be no dispute, is sufficient reply to the motion for restraining order which is being urged at this time.

THE STATE OF GEORGIA IS ESTOPPED BOTH IN LAW AND EQUITY TO SEEK INJUNCTIVE RELIEF IN THIS CAUSE:

(a) By her laches.

(b) By her long acquiescence in the operations she now seeks to enjoin.

(c) By her consent, agreement to, and insistence upon the adoption of the present method of pyrite smelting and the high stack erected in connection therewith and lately put into operation.

The Supreme Court of Tennessee, in the case of **W. M. Madison vs. Tennessee Copper Co., and Ducktown Sulphur, Copper & Iron Co., 113 Tenn. Rep., p. 338,** said:

> "Prior to 1870 one Raht began the operation of a copper mine at Ducktown, and worked it for several years. Subsequently it was owned by the Union Consolidated Mining Company, Mr. Raht's successor. These operations were continued until the year 1879, and were then suspended until 1891. During the latter year the Ducktown Sulphur, Copper & Iron Company commenced operating the properties formerly owned and operated by the Union Consolidated Mining Company and has continued to operate them ever since. The

Pittsburg & Tennessee Copper Co. began operations at Ducktown about the year 1881, and then continued until about 1899, when it sold out to the defendant Tennessee Copper Company. The latter began its operations in 1900, and commenced roasting ores in May, 1901. It has continued work ever since."

On pages 355-356 the Court further said:

"We are of the opinion that the complainants in the first bill are estopped to claim equitable relief against the defendant thereto by their laches. It is clearly to be inferred from the facts found by the Court of Chancery Appeals and above noted, that these complainants had been suffering the injuries now complained of for ten years when the bill was filed without making any complaint of them in any forum. In the meantime the defendant had expended several hundred thousand dollars in making improvements in the plant, and the nature and source of the injury were such that the complainants could not be mistaken as ot the cause or extent of it. Under such circumstances we are of the opinion that it would be inequitable to grant the severe remedy of injunction, but that the said complainants should be left to their actions for damages."

The Court held that complainants in this case were guilty of laches, using the following language, and following citation of authority (pages 351-352):

"And the equitable remedy by injunction must be applied for with reasonable promptness. There must be no laches. **Caldwell vs. Knott, 10 Yerg., 210, 212; W. J. Stamps et al. vs. W. H. Hartford et al, MS. Nashville, December Term, 1898; Bassett vs. Company, 47 N. H., 438, 441; Goodal vs. Crofton, 33 Ohio St., 271, 31 Am. Rep., 535; Whitney vs. Union Railway Co., 11 Gray (Mass.), 359, 71 Am. Dec., 715; Reid vs. Gifford, 6 Johns Ch., 19; Clifton Iron Co., vs. Dye, 87 Ala., 468-472, 6 Sou., 192; Traphagan vs. Jersey City, 29 N. J.**

Eq., 206; Morris, etc., Ry. Co. vs. Prudden, 20 N. J. Eq., 530; Sprague vs. Rhodes, 4 R. I., 304; Gray vs. R. Co., I Grant, Cas. (Pa.), 412; Stewart Wire Co. vs. Lehigh Coal & Nav. Co., 203 Pa., 479, 53 Atl., 352; Powers Appeal, 125 Pa., 186, 17 Atl., 254, 11 Am. St. Rep., 882; Dana vs. Valentine, 5 Metc. (Mass.), 8; Shelton vs. Rockwell, 9 Wis., 166, 76 Am. Dec., 265; Parker vs. Winnipiseogee Lake, Etc., Co., supra; Tuttle vs. Church, supra; Tuttle vs. Brightman (C. C.) 53 Fed., 429; Bankhart vs. Houghton, 27 Beav., 425; Great Western R. Co. vs. Oxford, Etc., R. Co., 3 De G., M. & G., 341, 359-361; Williams et al. vs. Earl of Jersey, I. C., R. & Ph. (18 Eng. Chan. Rep.), 91; Wood vs. Sutcliffe, 8 Eng. L. & Eq., 217, 2 Simmons (N. S.), 163; Weller vs. Smeaton, 1 Cox Cases in Eq., 102; Cooper vs. Hubbuck, 30 Beav., 160, 166, 167; Birmingham Canal Co. vs. Lloyd, 18 Ves., 515; Graham vs. Birgenhead, Etc., Ry. Co., 48 Eng. Ch. Rep., 2 M. & G., 146; Atty. Gen. vs. Sheffield Gas Consumers Co., 3 De. Gex., M. & G., 304, 52 Eng. Chan. Rep., 237."

In **Clifton Iron Co. vs. Dye, 87 Ala., 471,** it was held that standing by for three years without complaint would estop complainant. The Court said:

> "Clearly it was the duty of complainant to give the company some intimation of his objection, and not to stand by with full knowledge and permit it to make large outlays on these washers and then seek the aid of a court of equity to arrest their operations. Reasonable diligence in assertion of his rights was the measure of complainant's duty in this case, and failing in this he must now seek relief in a court of law for any damage he may have suffered."

A party who applies to a Court of Chancery for aid of its extraordinary powers must show himself to have been vigilant and diligent.

Dulin vs. Caldwell & Co., 28 Ga., 120.

"The vote of the town to do the work and to raise and appropriate the sum of $1,500 to pay for it was passed on the 2nd of March, 1857, and it is alleged in the answer and conceded by petitioners that substantially the whole work had been done and an expense to the whole extent of the appropriation had been incurred upon the credit of the town before this petition was presented. We think these facts are decisive against the claim of petitioners for equitable relief, and that the case is clearly within the doctrine stated in Tash vs. Adams, 10 Cush., 252 (Mass.) It was said by the Court in that case that: 'It is a well established rule in equity that if a party is guilty of laches or unreasonable delay in the enforcement of his rights he thereby forfeits his claim to equitable relief,' and that 'this rule is more especially applicable to cases where a party being cognizant of his rights does not take those steps to enforce them which are open to him, but lies by and suffers other parties to incur expenses and enter into engagements and contracts of a burdensome character.' "

Fuller et al. vs. Inhabitants of Melrose, 1 Allen, 166 (Mass.)

"If the object be to stop the erection or further operation of a large and costly work, it should appear that the application has been made as soon as the party became apprised of his right and the extent of the injury with which they were threatened, or at least it must not appear from the bill itself that there had been any expressed or tacit admission or acquiescence not properly accounted for. (Citing a number of English cases.) A court of equity frequently refuses an injunction where it acknowledges a right when the conduct of the party complaining has led to the state of things that occasioned the application; or in other words, it grants or refuses an injunction in many cases, not upon the ground of the right

possessed by the parties, but upon the ground of their conduct and dealing before they applied to the court for an injunction to preserve and protect that right."

Binney's Case, 2 Bland, 96 (Md.) Quotation from page 100.

"It is a well established rule in equity that if a party is guilty of laches or unreasonable delay in the enforcement of his rights, he thereby forfeits his claim to equitable relief. This rule is more especially applicable to cases where a party, being cognizant of his rights, does not take those steps to assert them which are open to him, but lies by and suffers other parties to incur expenses and enter into engagements and contracts of a burdensome character. The facts bearing on this part of the case as presented by the petitioners bring it very clearly within the operation of this salutary rule. The petitioners not only failed to use due and reasonable diligence in asserting their rights and seeking a remedy, but were guilty of gross laches. With a full knowledge of the vote of the town and the proceedings of the committee they permitted contracts to be made, and expenses to be incurred, not only by the committee, but by third parties who acted in good faith, relying on the credit of the town. They took no measures to enforce their rights until after the celebration had taken place, and innocent parties had come under liabilities which they would not have assumed, if the petitioners had reasonably sought redress for the impending grievance. To issue an injunction restraining the payment by the town of the bills thus incurred, would be manifestly most inequitable."

Tash vs. Adams, 10 Cush., 252 (Mass.)

"If the complainant has lain by and slept over his rights; has seen the defendant making contracts, and expending large sums of money, in the prosecution

of their work, and taken no steps to restrain them; it is fatal to the application. It is a law of the court, and dictate of sound reason, that when a party desires extraordinary aid he must be prompt in his application."

Scudder vs. Trenton Falls Co., 1 N. J. Eq., 694.

This rule has been laid down in numerous cases by this Court, as well as by the courts of last resort in most of the States of the Union.

"The cases are many in which this defense has been invoked and considered. It is true that by reason of their differences of fact no one case becomes an exact precedent for another, yet a uniform principle pervades them all. They proceed on the assumption that the party to whom laches is imputed has knowledge of his rights and an ample opportunity to establish them in the proper forum; that by reason of his delay the adverse party has good reason to believe that the alleged rights are worthless, or have been abandoned; and that because of the change in condition or relations during this period of delay it would be an injustice to the latter to permit him now to assert them." * * * (Reviewing many cases decided by this court prior to 1891.) * * * "But it is unnecessary to multiply cases. They all proceed upon the theory that laches is not like limitation, a mere matter of time; but principally a question of the inequity of permitting the claim to be enforced, and inequity founded upon some change in the condition or relation of the property or the parties."

Galliher vs. Caldwell, 145 U. S., 368, quotation from 372 and 373.

In Speidel vs. Henrici, 120 U. S., 377, 387, this Court said, speaking through Mr. Justice Gray:

"Independently of any statute of limitations, courts of equity uniformly decline to assist a person who has kept silent upon his rights and shows no excuse for his laches in asserting them. 'A court of equity,' said Lord Camden, 'has always refused its aid to stale demands, where the party slept upon his rights and acquiesced for a great length of time. Nothing can call forth this court into activity, but conscience, good faith and reasonable diligence; where these are wanting, the court is passive and does nothing. Laches and neglect are always discountenanced; and, therefore, from the beginning of this jurisdiction there was always a limitation to suits in this court."

In Galliher vs. Caldwell, 145 U. S., 368, 371, speaking through Mr. Justice Brewer, it was said:

"The question of laches turns not simply upon the number of years which have elapsed between the accruing of her rights, whatever they were, and her assertion of them, but also upon the nature and evidence of those rights, the changes in value, and other circumstances occurring during the lapse of years. The cases are many in which this defense has been invoked and considered. It is true that by reason of their differences of fact no one case becomes an exact precedent for another, yet a uniform principle pervades them all."

In Hammond vs. Hopkins, 143 U. S., 224, 250, through Mr. Chief Justice Fuller, the court said:

"No rule of law is better settled than that a court of equity will not aid a party whose application is destitute of conscience, good faith and reasonable diligence, but will discourage stale demands for the peace of society, by refusing to interfere where there have been gross laches in prosecuting rights, or where long acquiescence in the assertion of adverse rights has occurred."

In Willard vs. Woods, 164 U. S., 502, 524, the court said:

> "But the recognized doctrine of courts of equity to withhold relief from those who have delayed the assertion of their claims for an unreasonable length of time may be applied in the discretion of the court, even though laches are not pleaded or the bill demurred to." (Citing a number of cases).

In the case of New York City vs. Pine, 185 U. S., page 98, this Court, through Mr. Justice Brewer, said:

> "If the plaintiffs had intended to insist upon the strict legal rights (which for the purposes of this case we assume they possessed), they should have commenced at once and before the city had gone to expense, to restrain any work by it. It would be inequitable to permit them to carry on negotiations with a view to compensation until the city had gone to such great expense, and then, failing to agree upon the compensation, fall back upon the alleged absolute right to prevent the work. If they had intended to rest upon such right and had commenced proceedings at once, the city might have concluded to abandon the proposed undertaking and seek its water supplies in some other direction. If this injunction is permitted to stand the city must pay whatever the plaintiffs see fit to demand, however extortionate that demand may be, or else abandon the work and lose the money it has expended. While we do not mean to intimate that the plaintiffs would make an extortionate demand, we do hold that equity will not place them in a position where they can enforce one.
>
> "The time at which parties invoke the aid of a court of equity is often a significant factor in determining the extent of their rights. **Vigilantibus non dormientibus aequitas subvenit** is a maxim of equity. As said by Pomeroy in his work on Equity Jurisprudence, Vol. I, Sec. 418, the principle embodied in this maxim

'operates throughout the entire remedial portion of equity jurisprudence, but rather as furnishing a most important rule controlling and restraining the courts in the administration of all kinds of relief, than as being the source of any particular and distinctive doctrines of the jurisprudence. * * * The principle thus used as a practical rule controlling and restricting the award of reliefs is designed to promote diligence on the part of suitors.' ''

The above case was one where the plaintiff had deferred bringing his suit for two years, and in the meantime the defendant had been allowed to expend large sums of money in the exercise of a supposed right.

Applying the principles set forth in the foregoing authorities to the facts of this case, as we view it, they are conclusive of Georgia's action.

The development of these copper mines started something like fifty years ago, or more, and has been steadily increasing most of the time since then. The development on a larger scale by these defendants and the predecessor in title of this defendant, began in 1890, something like sixteen years ago, and has been increasing in point of investment ever since that time; and so for sixteen years, practically, this defendant and its predecessors in title having been continuing without any protest on the part of the State of Georgia in the exercise of a supposed right; they have expended millions of dollars, as shown by the proof in this cause as well as by reference to the case of **Madison vs. The Tennessee Copper Company, 113 Tenn., p. 338.** They have erected large and costly buildings and have expended large sums of money in development until now where in 1890 there was but a scattered population of two hundred there is now a town of more than twelve thousand people, wholly dependent upon these industries. Thousands of buildings have been erected; thousands of homes have been estab-

lished. The annual pay-roll of this defendant alone, as shown by the affidavits, is something like three quarters of a million dollars, all of which goes directly to the maintenance and support of the inhabitants of this community. In addition to this, more than this amount is expended for supplies by this company alone.

Had the State of Georgia undertaken to pursue her remedy when these works started and been able to maintain her contention that the operations of the defendant would irreparably injure her, then an injunction would have been of slight damage either to these defendants or to those indirectly interested, but its effect at the present time would be not alone the destruction of an investment of several million dollars so far as this defendant is concerned, but would fall more heavily still upon the very large communities wholly dependent upon this industry; and we submit to the court that the apparent results of the granting of an injunction in this cause show conclusively the wisdom and justice of the rule of equity so often affirmed by this Court that a party will not be allowed to stand by, and by his silence acquiesce in the exercise of a supposed right, then when that supposed right has been exercised and large sums of money have been expended, and the parties placed in a different attitude, undertake to exercise that right to the detriment of others.

Furthermore in this case, at the time the bill was filed, it was sought to enjoin the erection and placing in operation of four new furnaces being erected by the Tennessee Copper Company; and motion for preliminary restraining order seems to have been directed largely, if not altogether, to the restraining of the erection and placing in operation of these new furnaces. When this motion for restraining order was set for hearing on December 4th, 1905, **it was continued for the express purpose of allowing defendant to complete and put into opera-**

tion said new furnaces and high stack erected in connection therewith, which has been done.

It seems to us that the rules of law above discussed are peculiarly applicable in this case. The very work now sought to be enjoined by plaintiff has been completed by its consent and acquiescence, and the very furnaces now sought to be enjoined by plaintiff have been completed and put into operation by the consent and acquiescence of the State of Georgia pending their erection and have been built and put into operation at an expense of more than One Hundred and Fifty Thousand Dollars. It seems to us therefore that the State of Georgia is estopped by her laches and by her acquiescence in these operations to now seek an injunction against their being further operated.

The State of Georgia shows no such state of facts as to entitle her to the relief sought.

(a) An injunction in a case of this kind is never a matter of right but of grace and within the orderly discretion of a court of equity.

(b) This is especially true in the matter of application for a preliminary restraining order.

(c) Manifestly a preliminary injunction in this case would be far-reaching in its effects and would produce greater injury to the one side than its refusal would to the other.

(d) Plaintiff and those she represents have a full, adequate and complete remedy at law.

That an injunction in a case of this kind is never a matter of absolute right but one of judicial discretion is, as we view it, the well-settled law of courts of equity.

A late case peculiarly in point is that of **Madison vs. Copper Companies, 113 Tennessee, 331.** The Court said **(pages, 358-360);**

"But there is another principle which is of con-
"trolling influence in this department of law, and in
"the light of which the foregoing principle must be
"weighed and applied. This is that the granting of
"an injunction is not a matter of absolute right, but
"rests in the sound discretion of the court to be de-
"termined on a consideration of all of the special cir-
"cumstances of each case, and the situation and sur-
"roundings of the parties, with a view to effect the ends
"of justice.

"A judgment for damages in this class of cases is
"a matter of absolute right where the injury is shown.
"A decree for an injunction is a matter of sound legal
"discretion, to be granted or withheld as that discre-
"tion shall dictate, after a full and careful considera-
"tion of every element appertaining to the injury.

"These propositions will be found to be substan-
"tially confirmed and enforced in the following author-
"ities:

"In **Clack vs. White** (a nuisance case) it is said:
" 'It is also admitted in defendant's answer that the
"way was open and that he afterwards obstructed and
"closed it. So that both the legal title to the way and
"its obstruction by defendant appear in the present
"record. But it does not follow as a corollary that
"therefore the injunction will lie. The special injunc-
"tion is not a writ of right, but it rests in the sound
"discretion of the court; and hence Mr. Story says:
" 'No injunction will be granted whenever it will
"operate oppressively or inequitably, or contrary to
"the real justice of the case.' " **2 Story Eq. Jur., Section 959; 2 Swan, 545.**

"**In Wood on Nuisances (3 Ed.), p. 1182,** it is said:
"The true intent of a court of equity being to do jus-
"tice between parties, it will not issue a restraining
"order except where the rights of the parties demand

"it, and, in determining this question, all the circum-
"stances of location, the effect upon the defendant's
"business and interests will be considered; and, while
"the usefulness of the business, or its performance,
"magnitude, or extent will not in all cases prevent in-
"terference, yet, if the injury on the one hand is small
"and fairly compensable in damages, and the loss to
"the other party would be large and disastrous, an
"injunction will be refused and the party left to his
"legal remedy."

The court further said on **pages 360 and 361**:

"And so, too, the court is bound to compare con-
"sequences. If the fact of an actionable nuisance is
"clearly established, then the court is bound to con-
"sider whether a greater injury will not be done by
"granting an injunction, and thus destroying a citi-
"zen's property and taking away from him his means
"of livelihood, than will result from a refusal, and
"leaving the injured party to his ordinary legal rem-
"edy; and if, on thus contrasting consequences, it ap-
"pears doubtful whether greater injury will not be
"done by granting than by withholding the injunction,
"it is the duty of the court to decline to interfere.
"**Hilton vs. Earl of Granville, 1 Cr. & Ph., 283.** The
"duty of granting or refusing an injunction is a matter
"resting in sound discretion. It should never be
"granted when it will operate oppressively or contrary
"to the real justice of the case, or where it is not the
"fit or appropriate method of redress under all the cir-
"cumstances of the case, or when it will or may work
"fatal injury to the person enjoined. **Jones vs. City
"of Newark, 11 N. J. Eq., 452, 34 N. J. Eq., 469.** See
"also **Chartier's Block Coal Co. vs. Mellen (Pa.), 25
"Atl., 597, 18 L. R. A., 702, 34 Am. St. Rep., 645; Fesler
"vs. Brayton (Ind.), 44 N. E. 37, 32 L. R. A., 578.**"

The Court in the above case reviewed the authorities in a

very elaborate opinion, and we do not think it necessary to refer to the same authorities here.

It will be observed that in the Madison case above referred to, some injury to the property of the plaintiffs was undoubtedly being done. **That case arose and the facts shown therein were developed at a time prior to the installation of the present method of green ore smelting**; and even then when damage was being done to the property of individuals, the Court held that the granting of the injunction would operate so oppressively and would produce so much more damage upon one side than its refusal would upon the other, that the parties would be left to pursue their remedy at law.

In Richard's Appeal, 57 Pa. St., 105, the Court said:

> "An error seems somewhat prevalent in parts at least of this commonwealth in regard to proceeding in equity to redress a commission of a nuisance. It seems to be supposed that, as at law, whenever a case is made out of wrongful acts on the one side and consequent injury on the other, a decree to restrain the act complained of must as certainly follow as a judgment would follow a verdict in a common law court. This is a mistake. It is elementary law that in equity a decree is never of right as a judgment at law is, but of grace. Hence the Chancellor will consider whether he will not do the greater injury by enjoining than would result from refusing, and leaving the party to his redress at the hands of a court and jury. If in conscience the injury should not appear, he should refuse the injunction. **Hilton vs. Earl of Granville, 1 Craig Ph. Ch. R., 294.**"

In Hilton vs. Earl of Granville, it appeared that the mining operations of the defendants, in which they had several hundred thousand dollars invested, were threatening to undermine and destroy plaintiff's dwelling house, but as the damage

which might result to him if he suffered the injury was susceptible of approximate compensation, and as the stopping of the operations by the injunction would entail upon the defendants irreparable injury, the injunction was refused.

The above rule of exercise of discretion and weighing conveniences and injury upon one side and the other is especially applicable to the case of an application for a preliminary injunction.

Ryan vs. Williams, 100 Fed., 172.

American Cereal Co. vs. Eli Pettijohn Cereal Co., 76 Fed., 372.

Milling Co. vs. Tennessee Coal, Iron & R. Co., 123 Fed., 811.

It would be useless to multiply authorities upon this question. It is undoubtedly the well-settled rule of courts of equity, especially applicable to these preliminary applications.

Perhaps the latest case bearing directly upon the questions here presented, is that of **Mountain Copper, Limited, vs. United States,** lately decided by the United States Circuit Court of Appeals for the Ninth Circuit. That decision was quite recently rendered and is now in process of publication. As it will be published within the next few days, as we are advised, we do not think it improper to quote from it. The facts of the case are exactly similar to those alleged by the plaintiffs. The Circuit Court granted an injunction upon the hearing upon the merits. The case was taken to the Court of Appeals and that Court reversed and dismissed the case. That Court said:

> "Indeed, that the comparative convenience or inconvenience of the parties from the granting or withholding the injunction sought should be considered, and that none should be granted whenever it would operate oppressively or inequitably or contrary to the real justice of the case, is a well-established doctrine,

and we need hardly multiply authorities to that effect."

It was claimed and was found by the Court in that case that the gases from that plant were producing damage to timber lands belonging to the government, but as in the present case it was found that large interests were involved; that towns had been builded and hundreds of people were dependent upon the copper works for their employment and livelihood. The Court weighing the convenience of the parties and the injury that would be done by the granting of the injunction as compared with that done by refusing, and considering that the damages were susceptible of accurate estimation, exercising a sound discretion, refused the injunction.

Without elaborating further upon the authorities at this time, we think it clear that the principles above announced are well settled, certainly in the matter of preliminary applications, as the present application is.

We submit in conclusion these propositions.

First: That the demurrer heretofore filed is well taken.

Second: That every allegation of the bill is fully met and denied by the proof offered herewith.

Third: That the bill is filed under a total misapprehension of the facts as clearly appears from the proof.

Fourth: That the State of Georgia is barred from the equitable relief sought by her long continued laches and acquiescence in these operations.

Fifth: After the bill was filed in this cause and it was discovered that it was filed upon a misapprehension of the facts, the hearing of this motion was continued until at very large expense the chimney and furnaces then in process of construction were completed; being the very same operations it is now sought to enjoin.

Sixth: It is evident that the granting of the preliminary restraining order asked for, would work irreparable injury to the defendant. It would not only stop its operations during the pendency of this suit, but would practically destroy the towns surrounding these operations and the organization of employes of this defendant for the reason that there is no other profitable employment in which they could engage in said community, and they would all be compelled to leave.

It seems to us upon the undisputed facts herein set forth that this application for a preliminary restraining order will be refused.

All of which is respectfully submitted.

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Of Counsel.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATEMENT.

The controversy in this case involves the unrestricted generation and liberation of sulphur dioxid, a highly destructive and poisonous gas, and other harmful fumes attendant upon the operations of defendant's copper mining and reduction works. These mines and works are located within the State of Tennessee and the reduction plants are but a short distance from the Georgia line, the ore being brought to the plants from mines more remotely located.

The gases complained of are generated by the roasting of ore at the reduction plants, which gases are liberated as primarily generated, without conversion or otherwise disposing of the harmful fumes, with the result that such fumes are diffused over and precipitated within the State of Georgia in their original, natural and concentrated state, and work vast injury to Georgia, her territory and property, and to the

property, health, comfort and happiness of Georgia's citizens.

The obnoxious fumes have been produced in the Ducktown region in quantities sufficient to injure Georgia and her citizens but a short time. The injury within Georgia has been accomplished within the past five years, but more injury will be done per month during the spring and summer of the present year, than was accomplished throughout an entire year at the beginning of such period. In the Ducktown locality, up to the year 1900, the Ducktown Copper Company was operating on so small a scale that the effects of its fumes were not perceptible as far distant from the plant (located several miles from the nearest Georgia territory) as the Georgia line. The Tennessee Copper Company began smelting to a limited extent the latter part of 1901, but it was not until the spring of 1902 that anything like extensive operations were begun. Copper operations in the Ducktown region at that time were practically confined to the defendant companies.

For a number of years prior to 1900 the copper production, and destructive fumes incident thereto, were too insignificant to be worthy of notice. The gross production of copper, not only in the Ducktown locality, but throughout the entire South, for the five years beginning 1885 was approximately but 125,000 pounds, or about as much per year for the whole Southern States as can be produced per day under the enlarged works of defendants.

Complaint of the damage was first made by citizens to the Legislature of Georgia in the early part of 1903, in consequence of which a legislative committee was appointed to make a full investigation in the premises and the Governor was authorized to take any and all steps necessary to prevent further injury, should the investigation disclose such to exist. The committee reported considerable damage already done by the fumes produced by the copper companies to Georgia, her citizens and property within the State.

Upon receipt of this report the same was communicated

by Georgia to the Governor of Tennessee, with the request that Tennessee abate such nuisance and prevent further injury to Georgia and her citizens by Tennessee, her citizens and denizens, which request Tennessee not only declined to grant but further declined to aid Georgia in the premises or to in any manner seek to remedy the injuries and evils reported to Tennessee.

Upon receipt of such refusal, the State of Georgia, after first notifying the copper companies to desist in the commission of said nuisance and damage, which said copper companies refused to do, filed its bill to the October term, 1903, of this Honorable Court, seeking the abatement of said nuisance and an injunction against the liberation of the harmful gases produced by the defendant companies, without said companies first converting or otherwise condensing or disposing of the sulphur dioxid before the liberation and diffusion of the fumes into the atmosphere.

At the time said first bill was filed it was represented by the copper companies and believed by both the copper companies and the State of Georgia that the nuisance complained of was due to the mode of roasting ore then in use, the roasting being done in open uncovered mounds or heaps several miles from the Georgia line. This mode the defendants proposed to forever abandon and thereby to eliminate the nuisance if the State of Georgia would dismiss her suit, which proposition was accepted and the suit dismissed.

Shortly thereafter the Tennessee Copper Company, the present chief offender by reason of its large production and the location of its plant, removed its roasting plant from a point several miles within the interior of Tennessee to a location but a few hundred yards' distant from the Georgia line and began roasting its ores through furnace smelters, producing and liberating gas in much stronger form and diffusing said gas directly upon Georgia soil without even the leavening influence of several miles of atmosphere formerly intervening under the location and operations as at the time the first bill was filed. In addition, the Tennessee Copper

Company was and is engaged in more than doubling the capacity of the plant, which, if allowed to operate as enlarged, will more than double the production of sulphur dioxid first complained of.

The remaining defendant, the Ducktown Sulphur, Copper & Iron Company, is still producing said fumes to about the same extent as when the first suit was filed.

The production of sulphur dioxid by both companies under the new process, its liberation in concentrated form, and the change of location of the Tennessee Company's roasting plant resulted in vastly increased injuries in Georgia, not only as to the amount of property injured, but also as to the scope of territory damaged and number of citizens affected.

In consequence of the continued and increased damage, instead of complete relief from the nuisance as was expected, renewed and continued complaints and appeals for aid were received by the legislature from said locality, as well as general reports of injury by the officials of the State, and, by resolution approved August 15th, 1905, a committee of experts, including the State Chemist, Geologist and Commissioner of Agriculture, was provided for, said resolution directing an examination of the territory and the ascertainment of the damage, if any, occasioned by said fumes, and further directing the Attorney-General, in the event of injury by said fumes, to take all proper and necessary means to prevent further injury within the State.

This committee reported the injuries vastly increased over those found by the committee of 1903; that the amount and scope of territory damaged was rapidly multiplying and infinitely greater damage threatened than had already been accomplished, and recommended immediate legal steps by the State to secure relief from the baneful effects of the fumes.

The results of this investigation were communicated to the defendants, who were again notified to abate said nuisance and to cease liberating into the atmosphere the sulphur di-

oxid generated by them. This the defendants failed and refused to do and thereupon the bill herein was filed.

The nuisance affects five hitherto exceedingly prosperous counties of the State of Georgia, their chief occupations and industries being in farming pursuits and lumbering. The fumes, as alleged by the bill, affect the country within a radius of fifty miles or more from the nearest point on the Georgia line, involving a territory considerably exceeding a thousand square miles in extent. Practically the whole of Fannin county is within this territory and, as shown by the last census, Fannin county alone has more than eleven thousand inhabitants. Vast quantities of farming lands within said area have already been abandoned, the wild land increasing with leaps and bounds each year since the defendants began extensive operations. Georgia owns in fee several hundred acres which have also suffered from the fumes.

The following evidence is offered:

1. Letter of the Tennessee Copper Company, joined in by the Ducktown Sulphur, Copper and Iron Company, relative to the abatement of the smoke nuisance under the proposed new process.

2. Agreement for abandonment of old process and of dismissal of original cause 14 in this Court in consideration thereof.

3. Affidavit of J. K. Haywood, Chief of the Miscellaneous Laboratory, Bureau of Chemistry of the United States, heretofore directed by the United States Department of Agriculture to investigate the effects of the fumes from the Ducktown copper companies upon vegetation, setting forth the result of such investigation and the chemical effects of said fumes.

4. Bulletin 89, Bureau of Chemistry of the United States in relation to the destruction of vegetation by sulphur dioxid.

5. Affidavit of John M. McCandless, State Chemist for Georgia, as to the chemical effects of the Ducktown fumes and the conditions resulting therefrom.

6. Affidavit of W. F. Fiske, Entomologist and Special Field Agent of the Bureau of Entomology of the United States, theretofore detailed by said bureau to determine the relation of sulphur dioxid in the smoke of said copper companies to the injury by insects in the forest killed or in course of destruction in the Ducktown vicinity, showing the destruction of vegetation due to the sulphurous fumes and not to insects or disease.

7. Affidavit of Ralph I. Smith, Entomologist to the State of Georgia, setting forth his investigation of the destruction of vegetation in the Ducktown locality and the fact that said destruction was due to the sulphur dioxid generated by the copper companies.

8. Affidavit of Wilmon Newell, Entomologist of the State of Louisiana, showing conditions in said Ducktown locality in the year 1903, and that fact that at said time no destructive insects were present in the timber of said section, but that same was then being injured and destroyed by the sulphur dioxid from the copper plants.

9. Affidavit of J. S. Holmes, Forester and Forest Assistant to the Bureau of Forestry of the United States, previously commissioned by said bureau to investigate forest conditions in and around the Ducktown vicinity, showing the destruction of forests in such locality to be due to the sulphur fumes.

10. Affidavits of D. A. Jones, E. Buffington, L. D. Rogers and A. E. Sharp, foresters, as to forest conditions in Murray, Gilmer, Fannin and Union counties, and showing the destruction of the forests by the fumes generated by said copper companies and damage already done to the timber.

11. Affidavits of Frank E. Shippen and A. E. Sharp, showing that the lumber interests within Murray, Gilmer, Fannin, Union and Towns counties will be destroyed by the continuance of said fumes, and that hundreds of men and teams will be thrown out of their employment and means of livelihood thereby, that thousands of dollars of property have already been destroyed and many hundreds of thousands more injured and will be destroyed if the fumes continue.

12. Affidavit of W. S. Yeates, Geologist of the State of

Georgia, showing the geological result of said fumes and the destruction of soil and injuries arising out of same.

13. Affidavit of Wm. A. Wright, Comptroller of the State of Georgia, showing the abandonment in the past two years of 47,391 acres of improved lands in the counties of Fannin, Murray and Union, said land being no longer cultivated, but allowed to lapse into barren or wild state; and the increase of cultivated lands in the counties adjoining Murray, Fannin and Union; and affidavit of T. G. Hudson, Commissioner of Agriculture of Georgia, showing the enormous increase in value of farm lands within the State.

14. Affidavits of about two thousand inhabitants of said region showing the injury to public roads and destruction of crops, orchards, timber and gardens, and the utter ruin of hundreds of square miles of farming, lumbering and fertile territory by the fumes of the Ducktown works; that the damage is rapidly increasing, and the fact that a continuance of said fumes will render valueless hundreds of thousands of dollars' worth of property and in effect work a confiscation of a large area of territory within the State of Georgia, pauperizing many communities as well as individuals.

Reference is also respectfully urged to the following publications:

United States Geological Survey report under title "Mineral Resources of the United States for 1903."

House Document, volume 44, session of 1902–1903.

House Document, volume 37, session of 1901–1902.

60 Southwestern Reporter, page 593, et seq., reporting the case of the Ducktown Sulphur, Copper and Iron Company *vs.* Barnes.

71 Southwestern Reporter, page 821, et seq., reporting Jones *vs.* Ducktown Sulphur, Copper and Iron Company.

83 Southwestern Reporter, page 659, et seq., reporting McGehee in Tennessee Copper Company.

Pyrite Smelting, a compilation of articles to the *Mining Journal* upon copper smelting, including statements by defendants' officials, of the profit and feasibility of sulphuric acid plants.

ARGUMENT.

It is not the intention of counsel to enter into an extensive argument with reference to the testimony concerning each of the various injuries alleged or rights sought to be preserved, but rather to direct the attention of the Court to the principal points embraced by the evidence, and to arrange such evidence so that it may be most conveniently referred to. Towards this end there have been attached to this argument as exhibits the affidavits introduced, those of an expert character appearing first, followed by general affidavits, the affidavits executed by entire communities being last attached.

THE GENERAL INJURY.

That recently there has been great destruction of timber and vegetation in the Georgia counties of Murray, Gilmer, Fannin and Union not even the defendants will question. The cause alleged may be disputed, but the injury can not be denied.

Vast quantities of timber have been destroyed throughout the territory of the State of Georgia within what may be termed the Ducktown region comprising hundreds of square miles of territory, crops have been killed, gardens ruined, orchards devastated and a large area laid waste and well-nigh converted into a desert region. The testimony to these facts is limited only by the number of inhabitants of the section within or opening upon the central Ducktown basin other than the employees of defendants or their dependents. Mile after mile of territory is not only wholly denuded of vegetation, but even the top soil capable of sustaining plant life has been washed away, leaving only decaying rocks with occasional patches of soil upon the surface. Besides the hundreds of affidavits exhibited here-

with, the facts have even been judicially declared by the Supreme Court of Tennessee, in which State similar injuries to those in Georgia are also apparent.

The cause of this destruction, and the injuries incident thereto, have been the source of investigation by not only legislative committees of the State of Georgia, but by officials of the State who were experts in the sciences involving plant life, including the State Chemist, Entomologist and Geologist, and, in fact, so great has been the damage and so widespread the injury, that the United States Government, upon its own motion, through its Bureau of Forestry, Department of Chemistry and Bureau of Entomology, has caused similar investigation to be made.

Each investigation disclosed sulphur dioxid to be the destructive agent. This gas is the chemical result of the incineration of sulphur or sulphurous ores, and a usual product of copper smelting plants which liberate the natural gases as generated, the strength of the sulphur dioxid so produced depending upon the percentage of sulphur in the ore smelted and the concentration of the gases occasioned thereby.

That sulphur dioxid is a most powerful, destructive agent of plant life is no longer an open question. This was long ago demonstrated by the chemists of both America and Europe, including the chemists of the United States Bureau of Chemistry. One of the most recent demonstrations in this connection is contained in Bulletin 89 of said bureau, in which it is shown that sulphur dioxid of the strength of 1 part to 100,000 of air is deadly, and 1 to 1,000,000 is injurious. At the strength of 1 to 10,000 the injury is immediate and the death of the plant accomplished in a very few hours. The truth of this is further certified by the affidavits of J. K. Haywood, Chief of the Miscellaneous Laboratory of the Department of Chemistry of the United States, and John M. McCandless, Chemist for the State of Georgia. Both of these experts have made a personal investigation of the Ducktown region, one at the instance of the Federal Government, and the other under the direction of

the State of Georgia. Both swear that the destruction of vegetation is due to the sulphurous gases produced by the copper companies.

An additional expert of the United States Department of Agriculture, J. S. Holmes, Forester and Forest Assistant in the Forestry Service of the United States, also made a thorough investigation. His investigation disclosed vast injury to forest growths, which injuries were the result of the sulphur dioxid diffused upon the timber.

The theory was advanced by the producers of the sulphur fumes that the death of vegetation was traceable to insects and further experts were appealed to, in order that this theory might be fully tested. W. F. Fiske, Entomologist and Special Field Agent of the Bureau of Entomology of the United States; Wilmon Newell, Entomologist for Louisiana, and R. I. Smith, Entomologist for Georgia, each made a full investigation of the timber and vegetation with special relation to insect injury.

The investigation of Entomologist Newell was made in the fall and summer of 1903, at which time Mr. Newell states there were practically no destructive insects in said vicinity, the only insects present being those which preyed upon dead matter. Not only were no destructive insects found, but no fungus or other timber diseases were present. Mr. Newell reports the injury done and being done traceable solely to the sulphur fumes of the copper company.

The investigation of Entomologist Fiske and Smith disclosed about the same condition, with the exception that the injuries were far greater and more widespread than in 1903, and that the destructive insects were beginning to appear, which appearance was mainly due to the injury to timber by the sulphur dioxid. The injured trees, in which the destructive insects breed by reason of the enfeebled condition of such timber, not only invite the attack of such insects, but become in effect incubators for the enemies of the surrounding forest. But for the injury by the sulphur fumes the destructive in-

sects would not get a stronghold or breeding-place within the timber belt. As yet the injury from destructive insects is small, and what damage they have done has been accomplished through the aid of the sulphur fumes. The forests are not only directly destroyed by the fumes, but the creation of forest enemies is brought about, and if continued may result in the destruction of timber by the enemies incubated through the aid of the sulphur dioxid even beyond the far-reaching effects of the poisonous fumes.

Even were we without the testimony of these experts in the matter of plant life, the evidence afforded by the inhabitants of said territory amply establish the destruction by the sulphur fumes. Incident after incident is recited where the fumes destroyed vegetables, gardens and crops in a single night. This destruction and the cause thereof is not a matter of conjecture, but of the knowledge afforded by the fact that the fumes, before the vegetation is killed, are present and noticeably strong, and that, although in mid-summer, the leaves and vines of the vegetation after the presence of such fumes wither as though under a heavy frost.

ABANDONED LANDS IN COUNTIES AFFECTED.

The testimony produced before this Honorable Court amply establishes in each connection, so counsel believes, the injuries alleged by the bill herein. A most striking illustration of the damage is shown by the affidavit of Wm. A. Wright, Comptroller for the State of Georgia. By the testimony of Mr. Wright it is shown that within the past two years in the counties of Fannin, Murray and Union the enormous amount of 47,391 acres of cultivated and improved lands have been absolutely abandoned and were allowed to lapse into a wild and wholly unproductive state; while within the eight counties surrounding same there has been an increase in lands, except two counties, one of the two having 533 acres less improved lands than in 1903, and the other about 4,000. In the remain-

ing six counties the improved lands have increased. In Gilmer county, by reason of the topographical situation, the injury to farm lands is by no means so great as in the three first named counties. Fannin county intervenes between Gilmer and the Tennessee line, near which the copper companies are located. A chain of mountains furnish the northern boundary line between Gilmer and Fannin counties, and these, of course, act as a buffer against the fumes. To the eastward, Fannin county extends quite a distance to the south and along the east line of Gilmer county, and the fumes only reach Gilmer county in the mountainous sections of the State, after having followed the river bed of the Toccoa river, or some of its tributaries. The region thus affected in Gilmer is largely confined to the wooded portion of the county, and while much timber is killed in Gilmer county, as yet no great damage is done to the farming and probably will not be until there is a sufficient destruction of timber to prevent the atmosphere from being purified through the medium of leaves, and, likewise, to remove the barriers to the fumes afforded by the forest.

This abandonment of agricultural lands in Gilmer, Fannin and Union counties has occurred at a time when farm lands within the State of Georgia were increasing in value by leaps and bounds. As shown by the affidavit of T. G. Hudson, Secretary of the Agricultural Department for the State of Georgia, farm lands generally throughout the State have increased from 50 to 100 per cent. within the past five years. This increase in value would alone furnish a natural and lively incentive to likewise increase the amount of cultivated lands, rather than to abandon lands in cultivation.

By hundreds of affidavits, it is declared that the continued production of the fumes will result in the abandonment of hundreds of square miles more of territory. Property values within the region affected by the Ducktown fumes have already greatly decreased and, with a continuation of the fumes, the lands will be rendered well-nigh if not wholly worthless. All portions of the counties have not been affected, and property in

the sections protected by mountainous barriers, or otherwise, from the fumes have increased in value and kept the general tax average up until the present year. In the neighborhood affected, however, values have decreased instead of increased, as the general conditions in the State warranted, and as has been the case in other localities similarly situated, except with reference to the sulphur fumes; and if the fumes continue in the future the values will so far decrease that the State will practically be without revenue from said section.

INJURIES TO ROADS AND HIGHWAYS.

The roads and highways of the State of Georgia, within the vicinity affected by said fumes, have already been seriously injured, their safety menaced, and their convenience interfered with. By the testimony of road commissioners and citizens generally, it is shown that it is necessary to keep special road hands to constantly watch for all timber, dead or dying from the effect of the copper fumes, such timber not only resulting in danger to persons, animals and vehicles passing over the road, but also to the free passage of the roadway, the said roads often being blocked by fallen timber. In addition to this, the destruction of the vegetation prevents the absorption of moisture and the death of the roots within the soil loses to the particles of earth much of their tenacity and lessens their resistance to the elements.

The general contour within the Ducktown section is hilly and presents often sharp declivities, and the destruction of the vegetation, with results as just stated, permits the heavy mountain rains precipitated within the region to run off as rapidly as same fall, there being nothing to impede the flow of water, or to absorb same, as was the case before the vegetation was destroyed. This naturally results in considerable washing and wearing away of the land, and is particularly disastrous to the roads within the section, ruts, holes and ditches being washed therein. From the same cause the streams are converted in a

few hours into raging torrents, and they in turn do vastly increased damage to both the roads they cross and the valleys through which they pass.

SPECIAL DAMAGE TO FARMS.

Throughout the farming section of this region two crops per year are planted, the winter growing crops, including wheat, rye and other small grain, in addition to the summer growing crops usually incident to farming regions.

The inhabitants of the Ducktown region are mainly farmers dependent upon their farms for their livelihood. Notwithstanding the fact that their crops have been killed for the past two years, they are forced to plant additional crops in hopes such crops may not be killed the next season, or else abandon their homes. Their farms and crops are their sole means of livelihood, and many have already been pauperized by defendants' fumes.

If the fumes are permitted to continue until a final hearing upon the merits is had in the case at bar the crops will be entirely destroyed, and the remaining valuable timber of every variety will be killed. Instead of only about 50,000 acres of land being abandoned in Murray, Fannin and Union counties should the fumes be generated until planting time for the next crop, the amount of acres abandoned will run up into hundreds of thousands. The injury to farms overshadows the other injuries wrought.

ACTUAL VALUE OF PROPERTY ALREADY DESTROYED.

The actual value of the property already destroyed is exceedingly difficult to estimate. Some idea, so far as the timber is concerned, is afforded by the affidavit of D. A. Jones, forester, who states the damage to timber upon a few specified land lots in order to illustrate what the damage might amount to. By a careful count of the dead trees upon land lots 121 and 122

of the 7th district, 2d section of Fannin county, Georgia, about eighteen miles in direct line from the Ducktown works, timber of the actual value of $2,086.00 was found to be destroyed. There are four land lots to the square mile and hundreds of square miles of territory within the harmful influence of said fumes, so that the possibility of injury in this connection is easy to see. Frank E. Shippen places the value of the forest destroyed upon the property of the Shippen Bros. Lumber Company alone at a sum exceeding $75,000.00. Crops, orchards and gardens of many times this value have been destroyed and wholly lost to Georgia and her citizens. Property values have decreased thousands upon thousands of dollars and the expense of keeping up the public thoroughfares much increased.

EFFECTS OF THE FUMES UPON HEALTH.

In addition to the pecuniary injuries, it is shown that these fumes have a deleterious effect upon the human system. The sulphur dioxid is not only disagreeable, but causes sensations of strangulation, severe coughing, and headache. These effects have been judicially declared to be the result of defendants' fumes by the Supreme Court of Tennessee in the case of Madison *vs.* Copper Co., 113 Tenn. 340. The fumes are particularly severe in the case of persons having weak lungs.

THE TENNESSEE COPPER COMPANY.

The present works of the Tennessee Copper Company were built with full knowledge by such company of the injury they would inflict upon the State of Georgia. The old works, several miles from the Georgia line, were abandoned under the complaint of the State of Georgia, and new works erected within but a few hundred yards of the Georgia line.

The present process used by the Tennessee Copper Company was installed not for the purpose of relieving any injury to the

State of Georgia, but, as will be seen from the report furnished by said copper company in 1904 to the United States Geological Survey (title "Mineral Resources for the United States for 1903," page 219), for the increased capacity of production afforded and the great decrease in expense accomplished thereunder. The following is taken from the report:

"The Tennessee Copper Company is forging ahead, having in 1903 produced 10,690,389 pounds of fine copper, as compared with 8,103,534 pounds in 1902. A third furnace and blowing engine were in course of construction. * * * It has been determined to increase the smelting capacity from 300,000 to 600,000 tons by enlarging the smelter from 3 to 6 furnaces. The new construction will extend over 18 months, so that the enlarged output will not come into play until well into 1905. The company is carrying out the plan of smelting unroasted or green ore which will not only reduce the operating costs but will increase the extraction, and will make a saving of not less than one cent per pound on the copper."

All of the works now constructed and in use by the Tennessee Copper Company or in course of construction were erected after notice of the nuisance and completed and put in operation after the damage and nuisance had, in effect, been confessed by said copper company.

THE NEW FURNACES AND PROPOSED CHIMNEY.

In addition to the works already in operation, the Tennessee Copper Company has about completed four new furnaces, more than doubling the capacity of the plant, which furnaces are connected with a chimney which, it is asserted, will be considerably taller than the stack connected with three furnaces in operation when the bill herein was filed. It is claimed by the copper company that the taller chimney will alleviate the nuisance, but this claim can not be substantiated.

As shown by the affidavits of McCandless, Haywood, Yeates

and others, and as an examination of the maps of such region will disclose, the Ducktown works are situated in a basin or depression of North Georgia and Tennessee, enclosed at greater or less distances on all sides by mountain chains varying from 2,500 to more than 4,000 feet in height. This depression is greatest toward the southeast and northwest, and less toward the east and westward. The plant at the Tennessee Copper Company is nearly a thousand feet beneath the mountain barriers. The smoke from the copper companies' plants, as shown by the pictures, follow the valleys and practically settle at some point within the basin—the direction taken by the smoke being dependent upon the direction of the wind currents. A higher chimney will result, as is shown by the affidavits of the chemists, foresters, and other experts in the science of plant life, in no benefit to the injured section, except that in a mile or two of the plant, which will be accomplished at the expense of the more distant territory, as the fumes will be given additional carrying power by reason of their liberation from a higher point. With this chimney and the increased production, not only will all the injuries be multiplied, but the territory subject thereto will be enormously increased. The strength of the fumes as generated and liberated from the present works is great enough to kill vegetables, melons, cane, gardens, corn, and other crops many miles distant in a few hours' time.

It is true that the chimneys of the Oxford Company near Staten Island afford relief to the community immediately in the neighborhood of such works. As is pointed out in the affidavit of John S. McCandless, chemist, the only locality threatened by the works near Staten Island is within the immediate neighborhood of the works. Beyond this, in almost every direction, is water. The fumes going through the chimney are carried to such a height that they do not fall within the immediate vicinity of the plant, but are carried over and upon the water, which serves to precipitate the sulphur dioxid and convert the same into sulphurous or sulphuric acid, and this, of course, does no damage in sea water.

Beyond the New York bay and the waters which well-nigh surround the Staten Island plant, the nearest land is almost wholly occupied by cities and towns, among which are Elizabeth, Newark, Jersey City, New York and Brooklyn, and their surrounding towns and villages. Towns and cities by reason of the heat generated as well as the gases produced, occasion, as is shown by the affidavit of John M. McCandless, a constant upward current of air. Should the fumes from the plant at Staten Island remain in the air until they reach the land this upward current would serve to greatly aid in dissipating the gas, and, in addition, vegetation within the cities named is so scant and widely separated and the atmosphere above same so constantly impregnated with smoke of some character, that even great injuries could not be directly traced to any fumes from a distance which may have occasioned same.

The enormous production of gas possible under full capacity of the copper works, considering the four new furnaces of the Tennessee Copper Company, is difficult to realize. In this connection, Chemist Haywood, of the United States Bureau of Chemistry, declares:

"The ore of said copper mines carries 3 per cent. or a little less of copper, and it seems safe to estimate that at least 2 per cent. is extracted; therefore, the original ore from which this 25,000,000 pounds per annum of copper was extracted amounts to 1,250,000,000 pounds of ore per annum. The ore contains on an average 19 per cent. sulphur, so that the amount of sulphur dioxid that could be obtained from this ore would amount to 475,000,000 pounds per annum. All of the sulphur, however, does not form sulphur dioxid, but part is retained in the slag. However, it seems safe to assume that 90 per cent. of the sulphur is given off into the atmosphere as sulphur dioxid. On this basis 427,500,000 pounds of sulphur dioxid would be given off annually. This would be enough to contaminate 42,750,000,000,000 pounds of air with one part of SO_2 to 100,000 parts of air, or enough to contaminate 529,000,000,-

000,000 cubic feet of air with one part of SO_2 to 100,000 parts of air. This contaminated air would cover an area of 189,752 square miles to a depth of 100 feet. For a period of one day the atmosphere for a thickness of 100 feet would be contaminated for 520 square miles, or in a circle with the furnace in the center the contaminated atmosphere would extend nearly thirteen miles in every direction. Sulphur dioxid in the atmosphere of the strength of 1 to 100,000 injures vegetation and as little as 1 to 1,000,000 has been proven to be also injurious."

In relation to the new furnaces of the Tennessee Copper Company, Dr. J. M. McCandless testifies:

"From the new furnaces alone of the Tennessee Copper Company, estimating their capacity at 12,500,000 pounds of copper per annum, enough sulphur dioxid would be generated daily (of the strength of 1 to 100,000) to render noxious 243 square miles of atmosphere 100 feet thick, and if the old works both of the Tennessee Copper Company and the Ducktown Sulphur, Copper and Iron Company were abandoned and left idle and only the new furnaces of the Tennessee Copper Company now in course of completion be operated, enough sulphur dioxid would be generated to contaminate the atmosphere to the thickness of 100 feet within a circle of territory 17.6 miles in diameter; at the strength of 1 to 300,000, which is very destructive to vegetation, the diameter of the circle would be increased to a little over twenty-two miles."

These estimates are upon the assumption that the gas radiates equally in every direction. As a matter of fact, the fumes are carried by the different wind currents so that the locality in the direction the wind is blowing receives the entire volume of the sulphur dioxid. Prevailing winds are from the northward, so that the State of Georgia receives a large percentage of the fumes generated.

The testimony of Chemists Haywood and McCandless make it apparent that every injury now being done will be doubled in amount and extent and accomplished infinitely more speedily if the new furnaces are permitted to operate. These furnaces, and for that matter the whole plant of the Tennessee Copper Company, was practically built in the face of the knowledge of the nuisance they would create.

The defendants in this cause were given ample time since the dismissal of the first suit by the State of Georgia to institute a process which would eliminate the sulphur dioxid. Instead of seeking to institute such a process, the Tennessee Copper Company has made a great outlay of money in erecting furnaces and appliances and have doubled their capacity both for the production of copper and sulphur dioxid, and likewise their ability to produce the injuries complained of by the State of Georgia, and in effect acknowledged by the copper companies. The Tennessee Copper Company certainly can lay no claim to further delay, nor, as for that matter, can either defendant, as no effort has even been made since the first suit in this connection, so far as complainant is aware, to do anything but lessen the cost of production and increase the profits of the two copper companies without regard to the injuries produced.

Complainant respectfully urges an immediate restraining order upon the grounds hereinbefore stated.

Respectfully submitted.

JOHN C. HART,
Attorney-General of Georgia.

LIGON JOHNSON,
Solicitor for Complainant.

EXHIBITS.

LETTER OF TENNESSEE COPPER COMPANY.

February 9, 1904.

Gov. Jos. M. Terrell, Atlanta, Ga.

DEAR SIR: Referring to the proceeding instituted by the State of Georgia *v.* The State of Tennessee *et al.*, I beg to advise you that as President of the Tennessee Copper Co., one of the co-defendants in this suit, that we are now preparing to make such changes in our smelting operations that I am of the opinion, and in fact can guarantee to you, that by the 1st of August, 1904, we will have ceased producing smoke from our roast yards. At the present time the Ducktown Sulphur, Copper and Iron Co. has entirely ceased roasting any ore and the roast yards are abandoned. The Tennessee Copper Company is awaiting the installation of a third blowing engine, and when this is erected, so that the third furnace may be put in operaion, they also intend to cease putting any more green ore upon the roast yards. This date we presume will be about the 1st of April.

I desire to call your attention to the fact that it takes from three to four months to roast ore after it has once been lighted, and, therefore, it is physically impossible to stop the roasting when it is once under way. To be concise our proposed method of smelting, which is now in successful use by the Ducktown Company, is to smelt the green ore directly in blast furnaces without preliminary roasting. The result is that instead of producing smoke, only a gas is produced, which being heated and concentrated, immediately rises to a great elevation and becomes so diluted with air as to be practically dissipated.

I call your attention to our intentions in this matter, so that you may postpone any action against us until such times as we have demonstrated the practical success of this new method, and which, as I say, we have every reason to believe will be in full operation in August or September of this year.

Yours very truly,

(Signed) J. PARK CHANNING,
Pres. Tennessee Copper Co.

On behalf of the Ducktown Sulphur, Copper and Iron Company (Ltd.) I beg to state the discovery of a new process has enabled this company to abolish the former practice of roasting its ore, that the new process is now in actual and successful operation, and that the roasting of ore will not again be resumed.

(Signed) W. H. FREELAND,
Gen. Mgr. Ducktown S., C. & I. C. (Ltd.).

AGREEMENT TO ABANDON ALL PROCESS AND TO DISMISS CAUSE.

In the Supreme Court of the United States.

October Term, 1903.

THE STATE OF GEORGIA,

vs.

THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY, THE TENNESSEE COPPER COMPANY, AND THE PITTSBURG AND TENNESSEE COPPER CO., *Defendants.* } In Equity.

Whereas, the State of Georgia filed its bill in equity against the above-named defendants on the day of 1904, in the Supreme Court of the United States, which suit is now pending, in which bill of complaint it is alleged by the State of Georgia that her public domain is injured by the defendant copper companies above named by the certain sulphurous smoke, fumes, and gases originated by the defendants in the operation

of their open roast-heaps for treating copper and sulphur ores; and

Whereas, at the time said suit was filed the Ducktown Sulphur, Copper and Iron Company (Limited) and the Pittsburg and Tennessee Copper Company was no longer roasting their ores in the open beds or roast-heaps, producing the alleged dense smoke and attendant fumes and gases complained of; and

Whereas, the Tennessee Copper Company, since the filing of the bill in this cause, has abandoned the roasting process, and has lighted its last roast-heap, and that each and all of said companies have heretofore and by this agreement declared that after the present ignited heaps have burned out neither of them will again return to said method of roasting their ores, of which method the State of Georgia especially complained:

It is therefore agreed between the State of Georgia and the defendants, in consideration of this stipulation on the part of said companies not to return to said method of roasting their said ores, that an order shall be entered specifying that said bill shall be dismissed.

It is further agreed that this stipulation and agreement shall be made a part of and filed in said case, and an order of dismissal issued in accordance therewith.

It is further stipulated that the dismissal of said suit shall in nowise be construed as an adjudication of any of the questions involved therein, and that it shall not operate to the prejudice of the rights of either or any of the parties beyond the terms of this agreement.

The Tennessee Copper Company.
By HOWARD CORNICK, of Counsel.

The Pittsburg and Tennessee Copper Co.
By HOWARD CORNICK, of Counsel.

The Ducktown Sulphur, Copper and Iron Co. (Ltd.).
By W. H. FREELAND, General Manager.

The State of Georgia.
By JOHN C. HART, Attorney-General of Georgia.
LIGON JOHNSON, Special Attorney.

AFFIDAVIT OF J. K HAYWOOD.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART, *Plaintiff.*

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

In Equity.

UNITED STATES OF AMERICA,
District of Columbia.

Personally appeared, J. K. Haywood, who, being duly sworn in the above styled and numbered cause, deposes and says:

Deponent is a chemist by profession, and is now Chief of the Miscellaneous Laboratory, Bureau of Chemistry, United States Department of Agriculture.

Deponent, in his official capacity, and under the direction of the Bureau of Chemistry, made for said Bureau at the request of the Bureau of Forestry, an investigation of the territory in and around the locality of Ducktown, Tennessee, for the purpose of determining whether or not the fumes of the copper plants in that vicinity were injurious to vegetation and the extent of same. These copper plants are located in a depression in the mountains of southeastern Tennessee, southwestern North Carolina and northern Georgia, the depression being greatest in

length in the southeasterly and northwesterly direction, and shortest toward the west and eastward.

In the process of reducing ore and extracting copper, used by said copper plants, the sulphur originally present in said ore is burned and given off in the air principally as sulphur dioxid, but to some extent as sulphur trioxid. For each pound of sulphur burned two pounds of sulphur dioxid are formed and given off into the atmosphere, a part of which acts directly on the foliage of the trees and plant life generally. Sooner or later, however, all of the sulphur dioxid is changd by action of the oxygen of the air into sulphur trioxid. The moisture present in the air unites with this sulphur trioxid to form the highly corrosive compound sulphuric acid, which, in its turn acts upon the delicate foliage.

Prior to the investigation at Ducktown, and in connection with the investigation made by the United States Bureau of Chemistry as to the injuries to vegetation from fumes arising from the copper smelting works of the Mountain Copper Company near Redding, Shasta county, California, deponent made full experiments in said Bureau of Chemistry in order that he might verify from his individual experience the effect of the sulphur dioxid upon plant life, and from said experiments, as well as experiments made by others, it was conclusively demonstrated that sulphur dioxid was destructive to plant life, and that when present, even in very small quantities in the air, kills vegetation.

Under the processes now in vogue in the Ducktown locality, the fumes are liberated from smokestacks or chimneys, and, consequently, are much stronger at their point of exit from the chimney by reason of their concentration and liberation from these necessarily narrow and circumscribed localities, than those generated and given off from open roast heaps and yards of equal capacity. Owing to the fact that the stacks or chimneys through which the fumes are liberated are quite low as compared with the surrounding country, the plants being located in the valleys or depressions, as heretofore stated, the gases do not have a very good chance to diffuse into the circumambient at-

mosphere before they are swept by the wind currents down the valleys, along the water-courses, and over the higher wooded ridges and hills of the surrounding regions.

The injuries done to surrounding vegetation, within the radius of the harmful influence of the sulphur dioxid is very great. In the immediate vicinity of the plants nearly all vegetation has been destroyed, and for a distance varying from about two to five miles from said plants the earth is practically destitute of vegetable growth, other than resistant species of grasses. Beyond this zone there is much injury, the damage, however, in most instances decreasing as the distance increases, but is greater, as before stated, towards the southeast and northwest, and in those directions where the vegetation is not protected by the barriers of high hills or mountain ranges. The territory affected in the Ducktown vicinity seems to be somewhat greater and the damage more extensive than that caused by similar fumes in the Shasta county, California, territory.

The Shasta county smelter is situated in a narrow valley, or what might also be termed a cut between the mountains; its highest chimneys are below the level of the surrounding land. In a northerly and westerly direction other narrow gulches branch off from the main one in which the smelter is located, through which gulches the fumes drift. Much more territory is included in the main basin and valleys subject to the Ducktown fumes.

In relation to the production of sulphur dioxid by the Tennessee copper companies, estimated upon the production of twenty-five million pounds of copper per annum, and assuming the works will produce their full capacity of copper when the furnaces are opened, the following results are given:

The ore of said copper mines carries 3 per cent. or a little less of copper, and it seems safe to estimate that at least 2 per cent. is extracted; therefore, the original ore from which the 25,000,000 pounds per annum of copper was extracted amounts to 1,250,000,000 pounds of ore per annum. The ore is said to contain on an average 19 per cent. sulphur, so that the amount of

sulphur dioxid that could be obtained from this ore would amount to 475,000,000 pounds per annum. All of the sulphur, however, does not form sulphur dioxid, but part is retained in the slag. However, it seems safe to assume that 90 per cent. of the sulphur is given off into the atmosphere as sulphur dioxid. On this basis 427,500,000 pounds of sulphur dioxid would be given off annually. This would be enough to contaminate 42,750,000,000,000 pounds of air with one part of SO_2 to 100,000 parts of air, or enough to contaminate 529,000,000,000,000 cubic feet of air with one part of SO_2 to 100,000 parts of air. This contaminated air would cover an area of 189,752 square miles, to a depth of 100 feet. For a period of one day the atmosphere for a thickness of 100 feet would be contaminated for 520 square miles, or in a circle with the furnace in the center the contaminated atmosphere would extend nearly thirteen miles in every direction. Sulphur dioxid in the atmosphere of the strength of 1 to 100,000 is injurious to vegetation and as little as one pound to 1,000,000 has been proven to be also injurious.

The witness is also of the opinion that the maximum of injuries from the sulphur dioxid produced by said copper companies, operating at their present capacity, has not been reached, but will increase both in volume and in the scope of territory covered with the continued production and liberation of said fumes. If the production is doubled, the injuries will be multiplied.

With each zone of timber killed it would appear that the carrying power of said fumes is increased, inasmuch as the destruction of timber and vegetation permits the fumes to travel further before being absorbed.

Deponent can not see why chimneys, even higher than those now used, can possibly relieve the situation. As heretofore stated, the smelters are within a depression in the mountains practically surrounded at varying distances by mountain ranges considerably higher than said chimneys, and the increase in height of said chimneys by one or two hundred feet even, would

merely result in giving said fumes a greater carrying power and a consequent ability to damage vegetation at greater distances.

J. K. HAYWOOD.

Sworn to and subscribed before me, this 27th day of November, 1905.

A. ZAPHONE,
Notary Public District of Columbia.

AFFIDAVIT OF JOHN M. McCANDLESS, STATE CHEMIST OF GEORGIA.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fulton County.

Personally appeared before the undersigned authority, John M. McCandless, who, being duly sworn, deposes and says:

Affiant is a chemist by profession and has been for the past twenty years, and is now State Chemist for the State of Georgia, which office affiant has held since 1898. In his capacity as State Chemist affiant was a member of the commissions of 1903 and 1905, appointed by the State of Georgia to investigate and report upon the damage, if any, being done to the State of Georgia and her territory in the neighborhood of Ducktown, Tennessee, by the copper-reducing plants located there.

Affiant personally made a careful investigation in the autumn of 1903, and found the Tennessee Copper Company roasting its ores in open roast heaps and liberating large quantities of sulphur dioxid, which had done, and was then doing, great damage to the timber, fruit and vegetation for a considerable distance within the State of Georgia.

The investigation of 1905 disclosed the fact that the Ducktown Sulphur, Copper and Iron Company and the Tennessee Copper Company had abandoned open-heap roasting and were reducing their copper by a new method, under which the green unroasted ore was smelted in a furnace, and all the sulphur gases produced in the process are thus concentrated in the throat of a single chimney for the plant of each of said companies and emitted therefrom. The Tennessee Copper Company, which generates the major portion of the gas liberated, had abandoned the plant and roast yards in operation when complaint was first made by the State of Georgia. This company had, however, erected furnaces and installed the process now in vogue at a new location, the same being but a few hundred yards distant from the Georgia line. The old roast heaps were several miles further distant from the Georgia territory.

The new process results in concentrating the gases, which were formerly liberated over a wide area from the open roast-heap into a narrow and circumscribed locality. Owing to the further fact that the height of these stacks or chimneys is quite low as compared with the surrounding country, the plants being located in a valley or depression of mountainous country, the gases have little or no chance to diffuse into the circumambient atmosphere before they are swept by the wind currents

against and over the high wooded ridges and hills of the surrounding region. The composition of these gaseous currents, being doubtless much richer in sulphur dioxid by reason of their concentration at the point of origin than those from the old roast-heap system, would naturally have a more destructive effect upon the forest trees and other vegetation against which they are driven by the winds than would have been the case under the old system.

When sulphur, either as brimstone or combined with iron, as pyrites is burned in the air it unites with the oxygen of the air to form SO_2, or sulphur dioxid, also known as sulphurous anhydride. Sulphur dioxid unites readily with the elements of water whenever found, either as vapor in the atmosphere or as rain or dew with the water which exists as a natural constituent of the bodies of plants and animals when inhaled. The chemical formula of water is H_2O, or two atoms of hydrogen and one of oxygen, which coming in contact with one atom of sulphur and two of oxygen, SO_2, combined with them to form a molecule of H_2SO_3; or sulphurous acid, which must be carefully differentiated from sulphuric acid, which contains another atom of oxygen and has the formula of H_2SO_4, and is a much more destructive and corrosive acid than the sulphurous, but both are capable of great damage to vegetation.

Observation and experience not only in America, but also in Europe, shows that the sulphur dioxid given off from chemical works and from smelting works and roasting-heaps are very injurious and deadly to vegetation. Schroeder has shown that sulphurous acid is absorbed by the leaves of deciduous trees and conifers. The leaves retain it mostly, a smaller part penetrating into the wood, the bark, leaf stalks either as sulphur dioxid or, after oxidation, as sulphuric acid. Morren shows that the leaves are more sensitive to sulphur dioxid than flowers. When present in a proportion of one to eighty thousand in the air the leaves of fruit are visibly affected in three to five hours, and this effect seems to spread after the direct action of the gas ceases. Adult leaves are usually more sensitive than the young leaves. Sulphurous acid dissolved in water is almost without effect,

while on the lower surface each little drop causes a formation of a spot visible on both surfaces. This solution is not quickly changed into sulphuric acid, the effect of the latter being quite different from that of sulphurous acid.

The Bureau of Chemistry, U. S. Department of Agriculture, has shown that as little as one part of sulphur dioxid in one hundred thousand of air does serious damage to vegetation; in fact, even so small an amount as one part to one million of air is injurious.

The new furnaces in course of installation by the Tennessee Copper Company will raise, so affiant is informed, the capacity of said works from the present output of about twelve million pounds of copper per annum to twenty-five million. If from an ore carrying a little less than 3 per cent. copper we estimate an efficiency of extraction of 2 per cent., it would require one billion two hundred and fifty million pounds of ore to yield twenty-five million pounds of copper. The ore is reported to contain 30 per cent. sulphur, but if the ore is placed at 20 per cent., and if we allow that one-fourth of this sulphur remains behind in slag and matte (which is probably a very excessive approximation), and the remainder is thrown out into the air in the form of sulphur dioxid, we should have three hundred and seventy-five million pounds of sulphur dioxid belched into the atmosphere from these furnaces. Supposing the air now to be contaminated with it in the proportion of one to one hundred thousand, we should have 495,000,000,000,000 cubic feet of air, or 177,557 square miles of air, one hundred feet in thickness, emitted for a period of one year. For a period of one day the atmosphere for a thickness of 100 feet would be contaminated for 486 square miles, or in a circle with the furnaces in the center the impregnated atmosphere would extend 12½ miles in every direction.

From the new furnaces alone of the Tennessee Copper Company, estimating their capacity at 12,500,000 pounds of copper per annum, enough sulphur dioxid would be generated daily to render noxious 243 square miles of atmosphere 100 feet thick, and if the old works, both of the Tennessee Copper Company

and the Ducktown Sulphur, Copper and Iron Company, were abandoned and left idle, and only the new furnaces of the Tennessee Copper Company now in course of completion operated, enough sulphur dioxid would be generated to contaminate the atmosphere to a thickness of 100 feet within a circle of territory 17.6 miles in diameter at a strength of one to three hundred thousand, which is very destructive to vegetation, the diameter of the circle would be increased to a little over twenty-two miles. Operated in conjunction with the remaining works, the contamination of the atmosphere and all damages incident thereto will increase in proportion to the increase of sulphur dioxid which will be generated by the new furnaces.

Affiant is informed by the president of said Tennessee Copper Company that the gas generated by said company was of the strength of six per cent. If this is true, and the gas this strength when expelled from the chimney it must expand eighteen thousand times its volume to become diluted to the extent of one to three hundred thousand, a strength highly injurious to plant life.

It is evident from a consideration of these facts that in course of time the air of the habitable globe would be rendered irrespirable by plants and animals were it not for the solubility of sulphur dioxid in water, and the further fact that the sulphur dioxid is washed out of the air by rain and carried to the sea through the water courses.

Affiant can see no reason why a chimney taller than the stacks now at Ducktown can benefit matters, so far as the injury within the State of Georgia is concerned.

As hereinbefore stated, the surrounding mountains are far above the level of the works, and, consequently, the chief difference taller chimneys might make would be that in the immediate neighborhood of the works might profit slightly at the expense of the more distant territory, the higher the chimney the greater the carrying power of the fumes, unless such chimney is tall enough to overtop the surrounding barriers.

The tallest chimney in America of the character and such as that proposed by the Tennessee Company is, affiant believes, in

the State of New Jersey, on a narrow neck of land extending in the waters of New York Bay nearly to Staten Island, and separated from Staten Island by a channel only a few hundred yards in width. The heighth of this chimney, so affiant is informed, is 365 feet, and same stands back some distance from the water front, which will add probably 15 feet additional to its total altitude above the sea level. The plant from which this chimney is fed is almost wholly surrounded by water, the same varying, except as to that between Staten Island and the works, from a few miles to practically the width of the Atlantic ocean.

Beyond Staten Island is an unbroken stretch of water, and only one point on the islad, the crown of a single hill, as shown by Hydrographic Chart 369 New York Bay and Harbor, is equal in heighth to the chimney, so that when the wind is towards Staten Island from said works, unless the smoke falls to the earth almost immediately, it must pass over Staten Island and above or upon the waters beyond.

A great portion of the nearest land beyond the surrounding stretch of waters is occupied by towns and cities, among which are the cities of Elizabeth, Jersey City, New York and Brooklyn, with their surrounding towns and villages.

That such a chimney would furnish no criterion for the Ducktown country is clearly apparent. The sulphur dioxid coming down upon the water not only can do no damage, but is to a considerable extent absorbed by the water. The constant mists and fogs in effect furnish water to unite with the sulphur dioxid and precipitate the resulting sulphurous acid into the sea.

Should the smoke, even in considerable strength, reach a neighboring shore, it has little opportunity for injury, and the injury little chance for identification. The heat of citis and towns being greater than that of the surrounding country, causes a well-nigh continual air or current upwards, which would, of course, help to carry up and dilute the sulphur dioxid, as well as distribute same to distant parts, and even should

smoke do injury in the cities the vegetation is so scarce and widely separated that injuries could hardly be traced.

Deponent is informed that less than five tons of sulphur are burned per day at said works, which is insignificant in comparison with the amount which may be calcined at the Ducktown works under the proposed capacity of the same. In addition to this, works situated as those near Staten Island would menace very little territory except that in the immediate neighborhood, and without the chimney only the adjoining Jersey shore and Staten Island would be likely to suffer. The chimney would of course benefit the immediate locality. As before stated, chimneys of like kind might benefit the neighborhood of the works now utterly denuded of vegetation, but this benefit would be, in the opinion of deponent, at the expense of more distant sections.

JOHN M. M'CANDLESS.

Sworn to and subscribed before me, this day of November, 1905.

W. H. HARRISON,
Notary Public, Fulton County, Ga.

AFFIDAVIT OF W. F. FISKE.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

UNITED STATES OF AMERICA,
District of Columbia.

Personally appeared, W. F. Fiske, who, being duly sworn in the above styled and numbered cause, deposes and says:

Deponent is an entomologist by profession, and has been for eight years, and is now, and for the past two years has been Special Field Agent, Forest Insect Investigations, of the Bureau of Entomology of the United States Department of Agriculture, and, as such, and in connection with his duties with said Bureau, in October, 1905, made a personal and professional investigation of the territory at and near Ducktown, Tennessee, for the United States Government, to determine the relation of the sulphur dioxid in smoke to the injury by insects to the forest trees in said locality.

Deponent says that he arrived at Ducktown on the 12th of October, and remained until the 17th, making daily trips into the field, for the purpose of studying the conditions as regards

the prevalence of forest insects of known destructive habits within an area about twenty-five miles in diameter, with its center at Ducktown; that the following is a summary of the results of these investigations, prepared from a study of the notes made in the field:

Noticeable or conspicuous injury to forest trees by the fumes of sulphur dioxid emanating from the copper swelters near Ducktown and Isabella, Tenn., extends over an irregular area to varying distances which are largely determined by the topographical character of the country. At the outer borders it is indicated by the scorching and premature dropping of the foliage, followed by the death of the upper branches of certain of the larger trees. In the intermediate zones, the trees are variously affected, the severity of the injury being determined by species, height, location, and, to a considerable extent, by what can only be considered as individual variation in the ability of trees of the same age and species to withstand the effects of the fumes. In the central portions of this area, practically all the trees have been killed. It does not appear that the injurious effects of the fumes have yet reached their maximum, but that if present conditions continue many of the trees as yet but slightly injured will eventually die.

The presence of fumes of sulphur dioxid in the air in sufficient amount to cause injury and ultimate death to most of the higher forms of vegetation does not appear to have any direct effect upon insect life.

Insects which are capable of attacking and destroying living and healthy trees (destructive insects) breed in those that have been injured or killed by sulphur fumes.

Trees injured by the fumes are not as liable to insect attack as those injured through other causes, as lightning or storm. Though many such trees are attacked, the number is small in comparison with the total in the area affected. This is particularly true of deciduous trees.

The death of many trees more or less weakened by the fumes has been hastened by insects; in some cases by a few months

only; in others they would probably have lived several years had the insect attack been averted, or recovered had the effects of the fumes been discontinued.

Destructive insects breeding in the trees injured by the fumes show a tendency to extend their depredations to closely adjacent uninjured, or slightly injured, trees. This is particularly true of those species infesting pine, and to a less degree in the case of those occurring in hardwoods.

There are no indications that ravages by these insects will immediately spread beyond the limits of the present injury by fumes into forests now unaffected, as the work of destructive insects is more abundant in the central, more severely injured, sections, than toward the outer border of the area conspicuously affected by the fumes.

W. F. FISKE.

Sworn to and subscribed before me, this 27th day of November, 1905.

A. ZAPHONE,
Notary Public District of Columbia.

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AFFIDAVIT OF RALPH I. SMITH.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fulton County.

Personally appeared, Ralph I. Smith, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a graduate of the Massachusetts Agricultural College at Amhurst, Massachusetts, and is Entomologist for the State of Georgia.

Deponent, in connection with his duties as Entomologist for the State of Georgia, as aforesaid, during the summer of 1905 visited northern Georgia and the territory in the vicinity of the copper plants at and near Ducktown, Tennessee, for the purpose of investigating the cause of the death and destruction of vegetation in said locality.

Deponent found enormous destruction of timber throughout said region. In the immediate vicinity of said works practically all vegetation was destroyed for several miles, and in the zone adjoining this almost an equal distance the vegetation and trees

in particular, which had not already been killed, were rapidly being destroyed, and in fact were in practically a dying condition. In the zone beyond this great injury was apparent, particularly to trees such as hickory, white pine and chestnut oak; they being especially susceptible to the harmful effects of sulphur dioxid. The injury to the forests is, in a measure, governed by topographical conditions. Ducktown is situated within a basin, practically walled in at distances varying from ten to possibly nearly fifty miles by mountain ranges, the greater length of the basin being towards the southeast and to the northwest, the same being narrowest towards the east and westward.

The death of the forest within the State of Georgia is greatest towards the southeast, the effects of the copper fumes being plainly apparent frequently over more than twenty miles from said copper works.

The injury to the forest from the copper fumes is shown by the scorched and early falling of the foliage, followed by the death of the other branches of the trees. This is usually noticeable first in the taller trees, as they serve to protect in a measure the smaller growth from the full effects of the fumes. All trees are not affected equally, and even those of the same species, the power of resistance varying in individual trees in the same manner as the power to throw off the effects of poisons differ in human beings.

Deponent especially examined the timber and vegetation with reference to their destruction by insects. Various trees were examined, but no abnormal deaths from insects were discovered, nor was there indication of fungous diseases in the midst of the zone affected by the sulphur fumes. Destructive insects were found in living trees, but they were almost wholly confined to the trees already injured or dying from sulphur fumes. The injury from the fumes invites the attack upon the tree affected, and such trees in consequence of such injury often become in effect incubators to furnish enemies for the surrounding timber.

The destructive insects within the locality injured by the

fumes are apparently on the increase, but as yet their attacks are largely confined to the timber already damaged by the sulphur dioxid. But for this damage the amount of destructive insects within the territory would be but small, and as it is, the direct injury to healthy trees by such insects is insignificant. They will, however, increase with continued injury by the sulphur fumes, as the fumes are not strong enough to injure the insects, but serve to weaken the timber and invite the attacks of insects capable of attacking and destroying living timber. In many cases the injured trees attacked might have lived some time, had insect attack been averted, or might have fully recovered had the fumes been discontinued, but in each case the attack by such insects was, as a rule, attributable solely to the condition of the tree resulting from the effect of the sulphur dioxid. It was apparent, from the examination, that the harmful effects of the fumes had by no means reached their maximum, but would continue to grow with the continued production of sulphur dioxid. As each belt of timber is destroyed, the zone subject to the fumes is increased by reason of the destruction of the timber which had formerly intervened and served to absorb and hold back the destructive gases, and if the capacity of the works is doubled, as deponent understands is now being done, and the consequent additional amount of sulphur fumes diffuse over the territory traversed by deponent, each and all the injuries hereinbefore stated will be magnified, and the territory subject to the sulphur dioxid will be greatly increased. The injury will embrace not only the timber directly, but plant life generally, and will finally result in denuding the forest in a considerable part of the territory in Gilmer and Fannin counties, Georgia, and probably also in the counties of Murray, Union and Towns.

On a subsequent trip to said region, to wit, during the second week of October, 1905, deponent took pictures of parts of the country surrounding the Tennessee Copper Companies and the Ducktown Sulphur, Copper and Iron Company's works. These pictures are marked I, II, III, IV, V, VI, VII and VIII, and are hereto annexed and made a part of this affidavit, and are more fully described as follows:

The picture marked No. I was taken from Windy Ridge to the rear of McCay Town, overlooking valley of Okee river. Point marked X shows location of Tennessee Copper Company, and picture illustrates how fumes from the furnaces settle in the valley so as to almost completely obscure the view. This point is about one-half mile from the Georgia line.

No. II shows works of the Tennessee Copper Company on the right and fumes driving in a southeasterly direction down the valley of the Okee river. Hills in the distance obscured by the dense smoke.

No. III, taken one-fourth mile south of the Tennessee Copper Company, and about the same distance from McCay Town, through which the line between Tennessee and Georgia runs. Picture taken overlooking Okee river and L. & N. R. R., showing both Tennessee and Georgia territory. Dense smoke from the furnaces of the Tennessee Copper Company settled in the valley so that the hill opposite from where the picture was taken was practically shut off from view. On this morning the smoke was being carried by a northwest wind down several miles over Georgia territory.

No. IV is a view taken from Copper Hill looking toward the Isabella furnaces, and showing white smoke arising from same. This view shows a scope of country from four to five miles in extent absolutely bare of trees or any other vegetation except sedge grass. Hills badly washed and gullied by rains which run off without hindrance. From point where this picture was taken a backward view would show three miles of country extending about to the Georgia line equally barren.

No. V is a nearer view of the Isabella works, showing dense clouds of smoke arising from the furnace about two miles in the distance. This picture was taken from a hill where the Ducktown mines are located, looking toward Tennessee. The hills are absolutely barren of all vegetation except bunches of sedge grass. From position where this picture was taken it is about four miles to the works of the Tennessee Copper Company, and

the land in between presents an appearance similar to that shown in this picture.

No. VI, a view in Georgia territory about one mile from the new works of the Tennessee Copper Company, and about four and one-half miles from the Isabella works, showing hills denuded of timber and apple trees in foreground which are apparently dying from the effect of the fumes.

No. VII illustrates condition of oak timber in ravine one mile from Kyle, Georgia, and about three miles from Tennessee Copper Company furnaces. Seventy-five per cent. of the timber is dead and some of the remainder in a dying condition.

No. VIII was taken from a ridge in the rear of Kyle, looking up the valley of the Okee river toward Tennessee. Most of the hills are bare except for sedge grass, and the timber in spots is fifty to sixty per cent. dead, evidently from the effects of the fumes arising from the smelting of copper ore. Further observations show that at least sixty per cent. of the timber is killed and the remaining being slowly damaged.

RALPH I. SMITH.

Sworn to and subscribed before me, this 20th day of November, 1905.

LOGAN BLECKLEY,

Deputy Clerk Supreme Court of Georgia.

AFFIDAVIT OF WILMON NEWELL, ENTOMOLOGIST OF THE STATE OF LOUISIANA.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF LOUISIANA,
Parish of Caddo.

Personally appeared, Wilmon Newell, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is by profession an entomologist, and has been for — years, and is now entomologist for the State of Louisiana.

In the year 1903 deponent was entomologist for the State of Georgia, and as such about the late summer or early autumn of said year made an investigation of the territory within the State of Georgia adjacent to Ducktown, Tennessee, to determine the cause of the destruction of forest trees, growths and vegetation reported in said locality. Deponent examined the territory within the State of Georgia ranging from four to ten miles from the Tennessee line and said copper works, which examination disclosed that from five to six miles from said works 50 per cent.

at least of all timber was dead, and the vegetation generally was badly injured.

The theory that destruction of vegetable life was caused by insects or disease was advanced by those interested in the copper works. I could find nothing to support this theory.

In the investigation trees of the various kinds were cut down and examined for indications of insect work. In timber which had been dead for a considerable time, insects were abundant, but they were of species which feed upon dead vegetable matter, and, therefore, were not responsible for the death of the trees. Were insects responsible for this destruction they should be found in the dying timber. Examinations failed to reveal them except in rare cases. Possibly the death of one tree out of every five hundred dead was chargeable directly or indirectly to insect work. This amount of insect damage is comparatively insignificant, and is no more than can be reasonably expected to occur in any forest locality.

The average of destructive insects was very small indeed, and certainly not more than could be found in any average healthy forest region.

Again, trees killed by insect pests present certain characteristics which in the present case are conspicuously absent. The cambium (the layer of the cell-forming tissue immediately beneath the bark) in trees killed by the sulphur fumes frequently becomes blackened even before the tree has succumbed to the poison. This character we fail to find in trees dying from the attacks of insects.

The fact that certain trees in the affected locality die while trees adjacent remain apparently healthy does not necessarily indicate that the sulphurous acid smoke is not the destructive agent. The power of resistance when exposed to unfavorable conditions varies with different species, and may reasonably be supposed to vary in individual plants of the same species.

This power of resistance is in all probability directly proportionate to the vitality of the individual plant. Young trees or those most favorably situated with reference to moisture, soil, etc., may be expected to longer withstand the sulphur fumes

than others. That the resistance power in plants *does* vary in individuals of the same species, even when grown and kept under the same conditions, has been shown in the fumigation of nursery stock when by mistake the latter have been subjected to too strong a dose of hydrocyanic acid gas. Some trees will be killed while others of the same lot, when planted, grow well and show no indication of injury.

The roots of various dying trees in the affected area were examined and no indication found of fungous diseases.

From the examination made it was clearly apparent that the great destruction of timber and vegetation was due to no source other than the sulphur dioxid generated by the copper companies near Ducktown and Isabella, Tennessee. It was also apparent that the effects of the fumes would reach further and further each year of the operation of the said plants. The sulphur dioxid is to a large degree cleared from the atmosphere by the vegetation, the trees first coming within the influence of the smoke to a degree protecting those at a greater distance. As the zone of destruction of the timber would increase the zone of timber subject to the harmful influence of the fumes and would likewise be added to, and this will continue so long as the sulphur fumes are generated and liberated in the atmosphere. The said fumes will doubtless eventually denude of all useful vegetation a considerable portion of the land in Fannin and Gilmer counties, Georgia, and possibly also in the counties of Murray, Union and Towns, if the same are produced and liberated, as was the case when deponent made his examination in 1903, as aforesaid.

WILMON NEWELL.

Sworn to and subscribed before me, this 18th day of November, 1905.

J. A. THIGPEN,

Notary Public Parish of Caddo, Louisiana.

AFFIDAVIT OF J. S. HOLMES.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF NORTH CAROLINA,
Buncombe County.

Personally appeared, J. S. Holmes, who, being duly sworn herein, desposes and says:

Deponent is a forester by profession and is forest assistant in the Forestry Service of the United States Department of Agriculture.

In connection with the duties of his said office and under the orders of said Forestry Service, deponent during the summer and autumn of 1905 investigated for said Department of Forestry the forests and timber growths of the regions around Ducktown, Tennessee, including forest lands lying in the counties of Fannin, Murray and Gilmer in the State of Georgia.

Deponent found that great damage had been done to the forest and timber growths in and around Ducktown by the sulphur dioxid generated by the copper companies at and near said

place. Within a radius of from two to five miles from the smelters of said companies the forest and forest growths had been practically destroyed, and that much timber beyond this distance was dying or injured, the extent of the territory in which the timber was subjected to the harmful effects of said fumes being, in a measure, governed by the topographical conditions and prevailing winds. The area of injury extends farthest in a southeast and northwest and shortest in a westerly and easterly direction, this being due to the prevailing winds and river valleys in one case and to the proximity of high mountains in the other. For example, white pine is injured, among other sections, in a southeast direction along Jack river, Fannin county, Georgia, for a distance of ten miles from the Tennessee Copper Company's smelters at McCays, Tennessee; south on Turniptown Creek, Gilmer county, twenty miles; southeast on Flat Creek, Fannin county, fifteen miles.

Black oak is injured southwest on ridge between Tumbling and Pattersons Creeks, Fannin county, eight miles from smelter; south on Blue Ridge and Santalucca road, Fannin county, ten miles; southeast on Snake Nation Creek (Charlie Creek), Fannin county, twelve miles from smelter.

The general effect of the fumes is to gradually kill out the forest. The fumes act much quicker when the air is moist, so that there is more damage in the vicinity of the larger streams, where the morning mists lie; and more damage is done during a dull and rainy time, when the air is moist and heavy.

The more exposed trees are generally the first to be affected, so in a dense forest the undergrowth and reproduction may escape until the upper trees are dead or leafless or until they are cut out as in lumbering operations. There seems to be no greater resisting power in young than in old trees, other things being equal. As a rule ridges suffer worse than coves, and the slopes toward the smelters more than those away from them.

The injury is first seen in the leaves, and it is this leaf injury which first retards the growth of the tree and finally kills it. As it takes more applications of the fumes to hurt a leaf at a distance where the fumes are diluted, than near by, where they

are stronger, it follows that the farther from the smelter the injury appears the longer it takes to kill the tree.

The first symptom of injury is a gradual turning of the leaves to a yellow or golden brown color. This occurs in deciduous trees between July and September, according to the susceptibility of the tree or its nearness to the smelter. The leaves gradually die and fall prematurely. If this occurs early in the season it seriously affects the vitality of the tree, prevents the growth of summer wood and hinders the storage of food. In some instances the trees when first affected early in the season, put on a second crop of leaves. This is an effort on the part of the tree to recuperate. It is also observed where defoliation has been caused by insects. Some specie are more susceptible than others, and there is considerable variation between individuals.

The injury is spreading year by year. This is partly due to the fact that the gradual dying out of the trees permits the fumes to travel farther before being absorbed by the foliage as well as to increasing amounts of ore smelted. Deponent can see no reason why the tall smokestacks proposed should decrease the injury. With increased production the injury will certainly be still more extended if the fumes incident thereto are liberated.

J. S. HOLMES.

Sworn to and subscribed before me this 18th day of November, 1905.

J. SCOOP STYLES,

Notary Public Buncombe County, N. C.

(My commission expires May 23, 1907.)

AFFIDAVIT OF D. A. JONES, FORESTER.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Gilmer County.

Personally appeared, D. A. Jones, who, being duly sworn in the above-stated case, deposes and says:

Deponent is a woodsman, or forester and a timber surveyor by profession, and has been for the past twenty-four years, during which time he has followed his calling in the States of Kentucky, West Virginia, North Carolina, Tennessee and Georgia. Deponent's business embraces practical forestry, and in addition the examination of timber, relative to its commercial value, conditions, health and general surroundings, with special relation to lumbering and tanning purposes.

Deponent in the Autumn of 1904 and in the Summer and Autumn of 1905 examined the timber in Fannin, Gilmer and Murray counties in the State of Georgia, the territory inspected covering the northern, central, eastern, southern and western portions of Gilmer county; the central, eastern, southern and

western parts of Fannin and the northeastern portion of Murray county. The examination in 1904 extending over about two months, and that of 1905 a still greater length of time.

In 1904 considerable damage to the timber and vegetation from the fumes generated by the copper plants at and near Ducktown was apparent. The damage, while widespread, was not uniform in localities equally distant from the copper works; was in many instances governed by the topographical conditions, and in particular localities often by the unequal resisting powers of individual trees. In other words, timber protected by intervening mountains or hills or at an altitude not usually reached by smoke, or located away from the main lines of depression would be but little injured when other timber further away, but not so protected would suffer greatly from the fumes. Again in the same locality and among trees of the same species, the resisting power of the different trees is by no means uniform. While some are killed others may show but little effects of the fumes.

Ducktown and the copper works are located in a depression in the mountains of Tennessee, Georgia and North Carolina, somewhat oblong in shape, with its main length in the State of Georgia, and extending in chief along the Toccoa (Ocoee) river and tributaries. This basin is in effect walled in by mountain ranges varying from 2,500 to about 4,000 feet high. The damage from the copper fumes is greatest along the valley and foothill region of the Toccoa (Ocoee) and tributaries, Turniptown Creek, Connesauga River, and other localities similarly located and not protected by mountain barriers.

The investigation of 1905 disclosed a much greater injury resulting from the copper plants than was shown under the investigation of 1904, not only had the damage in the localities previously injured by the effects of the fumes increased, but the scope of injured territory had broadened greatly since the inspection of 1904.

For example, in the case of land lots Nos. 5, 6, 7, 30 and 32 in the Sixth District and Second Section of Gilmer county, about 21 miles by air or direct line from Ducktown, it was

shown by examination of 1904 that of the chestnut oak (the oak valuable for its bark (tan bark) as well as for its lumber) about 25 per cent. in lot No. 6, 50 per cent. in lot No. 7, 25 per cent. in No. 30 and 50 per cent. in lot No. 32 had been killed. The investigation of 1905 disclosed that about 85 per cent. in lots 5, 6, 7 and 32 and 70 per cent. in lot 30 had been killed. In other words the damage from the fumes in 1905 was more than double that done up to the autumn of 1904. The white pine and hickory had suffered about the same injury, and the other timber in proportion to its resisting power. The power of the forest trees in the district affected, to resist the killing effects of the sulphur fumes differ considerably, hickory, chestnut oak and white pine succumb most quickly, then the post oak, chestnut, yellow pine, hemlock, white oak, and poplar in the order named.

In recent examination (1905) of deponent it was clearly exhibited that the hurtful effects of the fumes are experienced considerably over thirty miles. This is especially true of the territory about the headwaters of the Toccoa (Ocoee) river, and its southern tributaries. In lots 84, 85, 86 and 87 in the Sixth District, first section of Gilmer county, Georgia, the lots being in the extreme southeastern portion of the county, and between thirty-five and forty miles distant by air line from Ducktown, a considerable portion of the timber has been killed by sulphur fumes. About 40 per cent. of the chestnut or mountain oak has been killed in the last two years. Practically all of the hickory is dead, a large per cent. of the white pine and the remaining timber is damaged. In fact, the entire forest shows the injurious effect of the fumes.

Deponent in the course of his investigation about six miles southeastward of the town of Blue Ridge, obtained from a mountain top a complete view of the Toccoa Valley and, with the aid of his glasses minute view of the copper works at Ducktown. The wind was favorable to full observation, bringing the smoke down the valley to the west of which deponent was standing, and the smoke was not only discernible the entire distance from the works up the valley to a point opposite the de-

ponent, but could be seen much further up the valley, and noticeably almost to the lots above specified. Intervening hills obstructed the view of said lots, and for this reason deponent could not see whether or not the smoke could be seen for the entire distance. It was clearly discernible the major portion of the way, and to a point where intervening hills shut off the view.

In and around land lot 144 in the Sixth District and first section of Fannin county about thirty miles from Ducktown, and twelve or fifteen miles north of the locality just before specified, the damage is very great. In land lot 144 about 75 per cent. of the chestnut oak has been killed within the past eighteen months or two years, and the timber generally injured in proportion.

To the westward about twelve miles from the last specified land lot and in the middle eastern section of Gilmer county, lie the land lots 5, 6, 7, 30 and 32 heretofore referred to, where the damage to and death of the chestnut, oak, hickory and white pine reaches the heavy total of about 85 per cent.

Still further to the westward in the locality of lot 119 in the tenth district and second section, about ten miles from land lots 5, 6, 7, 30 and 32 and 18 miles from Ducktown, 75 per cent. of the hickory and chestnut oak has been killed, and a large per cent. of the other valuable timber has been destroyed.

About twenty miles further to the northwest on the eastern edge of Murray county in the locality of lot 122, twenty-seventh District, second section, about fourteen miles from the copper plants, from 40 to 50 per cent. of the valuable timber is dead. The injuries do not appear to extend as great a distance in this direction as to the southward, there being intervening mountain ranges to protect the more distant localities to the westward.

In each of the localities heretofore specified the death of the trees has been of recent date, certainly in less than three years. The whole damage is by no means represented by the trees already dead. A large number in addition have been seriously injured and will eventually be killed if still subjected to the

sulphur fumes. While deponent could not accurately state the full damage done by the sulphur fumes, it is beyond a peradventure true that same amounts to many thousand dollars. The damage to the forest and timber interests alone within the territory inspected by deponent will exceed in deponent's opinion, the sum of $125,000. Other localities than those heretofore specified by deponent have been injured to as great or greater degree, and the intervening timber between the points mentioned and Ducktown lying within the regions along the water courses, or not barred by intervening mountains or foothills, has all suffered from the fumes.

To illustrate the destruction and value of the property destroyed, specific instances may afford a more definite idea. A land lot is 160 acres, there being four land lots to a square mile of territory. In land lots 121 and 122, seventh District, second section, in the southern portion of Fannin county, about 18 miles air line from the copper plants, a recent inspection by deponent disclosed the following conditions:

There have been destroyed within the past two years 1,047 chestnut oak trees; of the trees destroyed, 500 would have made 350 feet each of good lumber, same having a value of $437, and the remainder 1,000 railroad ties of the value of $150. They would have furnished 300 cords of bark for tan bark, value of $900. 31 hemlock trees have also been destroyed which would have given 600 feet of lumber each, value $37, and 20 cords of bark value $40, 15 white pine trees which would have averaged 700 feet of lumber to the tree were killed, value $105, 241 chestnut trees were killed, 50 of which would average 300 feet of good lumber to the tree, value $45, and the remainder 477 cords of wood, value $120, 154 white oak trees were killed, 30 of which would average 400 feet of quartered lumber and 75 trees 300 feet of plain lumber to the tree, value $127, the remainder would make 120 good railroad ties, value $15, 67 hickory trees were killed, which would have furnished 10,000 feet of good axle timber value $100; also, 10 yellow pine

trees averaging 300 feet of lumber to the tree, value $10, reaching a total of property destroyed in half a square mile of territory of value of $2,086.

In land lot 322 located in the central portion of Gilmer county the following condition was disclosed:

There have been destroyed within the last two years 861 trees of chestnut oak, 151 of these would have made 45,000 feet of good lumber, the remainder 1,000 railroad ties, the value of the lumber being $135, and the railroad ties $150. In addition to this these trees would have furnished 215 cords of tan bark of the value of $675, 30 chestnut trees were killed which would have made 60 cords of acid wood, value $15, 39 white oak trees were killed, 20 of which would have furnished 8,000 feet of good lumber, value $24, and 38 railroad ties of the value of $5.70; 59 hickory trees have been killed, which trees would have furnished 7,000 feet of good lumber, value $70, or a total of $1,094.70.

These values and figures are taken from a report heretofore made to the owners of said property and were based upon the actual value of the timber and not upon its prospective value had it not have been killed. In other words some of the timber killed was not of the size specified for lumber purposes, and would have been more valuable to the owner to have permitted the same to grow to the requisite size rather than cut at the time same was injured. The death of the timber has been so rapid and so general throughout the territory affected that the timber killed can not be utilized unless the owner is actually logging in the immediate section. As soon as a tree dies the worms get into same and as in the case of the lots just specified the loss from the destruction of the timber is absolute. All the timber specified was wholly lost. The damages specified do not include timber merely injured.

A considerable portion of the land in Murray, Gilmer and Fannin counties is valuable mainly for its timber and for forestry purposes; that is not only for the timber now actually ready for milling but for future crops of timber. The rule

among the lumbermen is to cut only the mature timber, timber 14 inches or more in diameter, and it is from this size timber that both the tan bark and lumber is obtained and, consequently, the land is made to furnish new crops of timber from time to time.

Within the smoke zone the value of forest lands and for that matter orchards and farm lands have been greatly decreased. In the matter of forests, in many instances property values have been decreased by half. The injury has not been by mere depreciation or failure of appreciation in value but by the actual destruction of property. If the sulphur fumes continue not only will the remaining timber be destroyed, but the land will be rendered wholly useless for forestry and orchards and also, as a rule, for agricultural purposes.

While the damage to the deciduous trees, by reason of their not being in leaf, is not so great in Winter, the injury to the conifers is much greater. The principal conifers within the section subject to the Ducktown fumes are the white and yellow pine and hemlock. The former are particularly valuable for the high grade lumber furnished and the latter for both its bark, which is used for tanning, and its lumber. These trees bear their foliage throughout the Winter and by reason of the coldness, as well as the dampness of the atmosphere, the sulphurous gases cling much closer to the earth, and these trees are not only subject to stronger fumes but have not even the aid of the deciduous trees in purifying the atmosphere.

Under the production of the gas as now generated, the damage to the forests is steadily increasing and will continue to increase from day to day. Deponent is informed that under the new works in course of erection by one of the copper companies the production of sulphurous gas will be probably doubled. If this be true not only will the injuries be multiplied but the damage will be much more quickly wrought by the reason of the additional strength and volume of the fumes, and in adition to all this, a large amount of territory now free from

positive injury will be brought within the harmful influence of the poisonous gases.

D. A. JONES.

Sworn to and subscribed before me this the —— day of November, 1905.

E. BUFFINGTON, C. N. P.,
Notary Public of Gilmer County, Georgia.

AFFIDAVIT OF L. D. ROGERS, TIMBER INSPECTOR.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
County of Gilmer.

Personally appeared, L. D. Rogers, who, being duly sworn in the above styled cause, deposes and says:

Deponent is a resident of Gilmer county, Georgia, and has been since 1843, and since the year 1861 has lived upon lots 324 in the 7th Dist. and No. 1 in the 6th Dist., 2d section in said county.

Deponent has been a woodsman and timber inspector for about eighteen years, and during said term has spent a considerable portion of his time in the inspection and care of forest in Murray, Gilmer and Fannin counties, in the State of Georgia. The forest in said counties up to about three years ago was generally healthy and no unusual conditions were apparent. In the immediate neighborhood of Ducktown, that is close to the Georgia line, some injury to the timber was noticeable a little earlier than 1902, but it was not until the summer or autumn of 1902 that anything like widespread injury was becoming apparent. From 1902 until the present time the injury to timber has been both enormous and widespread. Throughout a considerable portion of Gilmer and Fannin counties and the northeast portion of Murray county a large per cent. of the valuable timber has been destroyed, which destruction has resulted from the sulphurous gases generated by the copper companies at and near Ducktown and Isabella, Tenn. The timber suffering the greatest damage has been the hickory, white pine, chestnut oak and chestnut, but the forest generally has been much injured. Deponent's home place is situated about thirty miles distant in direct line from Ducktown. Practically all hickory, chestnut, white pine and chestnut oak on said land lots have been killed within the last two years and a large amount of the remaining timber either killed or injured. The injury to the timber is first apparent in the top and upper branches of the trees, and later extends over the entire tree. In the locality of deponent's home the odor of the sulphur fumes is both frequent and strong. When the wind is from the north the smoke and sulphurous gases are often so thick that they cloud the atmosphere and produce a heavy haze. The deponent lives upon the waters of Little Turniptown creek, and not only has the timber been killed as heretofore stated, but the fruit as far dis-

tant as deponent's home place has failed and upon his own place the fruits have been killed, and he has even been unable to make good fodder upon his farm. Deponent has also been practically forced to quit gardening, as his garden products were sometimes killed by the sulphur fumes in a single night. Up to the spring of 1903 deponent was very successful in raising garden vegetables, cabbages and the like, but since that time his garden has been a failure, and often after a night when the sulphur fumes were particularly strong the growing vegetables on the following morning would appear as though they had experienced a severe frost, and sooner or later would wither away and die. The damage seemed to be greater during the night than in the day time, probably by the reason of the air being colder and thereby causing the gases to stay closer to the ground.

The damage to forest, orchard, crops and garden during the past three years has been enormous. Thousands of dollars' worth of timber have been utterly destroyed and a large amount injured, which will also be ultimately destroyed if the copper companies continue to operate. In fact, a considerable portion of land valuable for forest and agricultural purposes will be rendered well-nigh, if not wholly, valueless if the copper works continue to produce the sulphurous smoke.

It will be difficult to state accurately the damage already done by the sulphur fumes. In many portions of the section liable to the fumes, as for instance, in the case of lots 5, 6, 7, and 30, in the 6th district, 2d section of Gilmer county, already nearly all the valuable timber has been killed, certainly more than three-fourths of same. In other sections equal damage has been wrought while in still others the injury is not so large. Certainly more than $100,000.00 of timber alone has been destroyed upon the lands inspected by deponent. Continued production of the gases will of course result in infinitely greater damage.

A short distance from deponent's home, from Aaron mountain, a few miles east of White Path, Ga., the Ducktown works are in view, and deponent has frequently traced the smoke from

Ducktown along the Toccoa river and Stanley and Cherry Log Creeks to points further distant than said Aaron mountain. The smoke, as a rule, appears to follow the valleys and lower lying lands along the rivers, creeks and the branches flowing into same. Aside from the actual damage wrought by the sulphur fumes, the odor is extremely disagreeable and unpleasant, and deponent, among others, suffers more or less discomfort therefrom. When the wind is in the north the fumes are blown down the valleys. A major portion of the time the wind is in the north within this particular territory, and blows the smoke in the direction of and over the Georgia territory.

L. D. ROGERS.

Sworn to and subscribed before me this the 9th day of November, 1905.

J. L. WEAVER,

Notary Public of Gilmer County, Georgia.

AFFIDAVIT OF E. BUFFINGTON, TIMBER INSPECTOR.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART, *Plaintiff.*

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

In Equity.

STATE OF GEORGIA,
Gilmer County.

Personally appeared, E. Buffington, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a resident of Gilmer county, Georgia, and is now and has been for the past year postmaster at East Ellijay, Georgia, but for about fifteen years prior thereto was a timber estimator and nursery agent operating mainly through the counties of Gilmer, Fannin, Union and Murray. About fourteen years ago deponent first made a thorough inspection and examination of the timber in said counties, inspection being made for J. W. Duckett, a timber contractor. At the time of said inspection the forests of said counties were generally healthy in appearance and condition, and abounded with valuable timber. In the subsequent inspections the timber continued to exhibit a healthy appearance until about three years ago,

at which time injuries to the timber, particularly the hickory, chestnut oak, white pine and chestnut was becoming apparent; since that time the destruction of the timber particularly in Fannin, Gilmer and the northeast portion of Murray county has been very great. The death of this timber can be attributed to nothing but the sulphur fumes generated by the copper companies near Ducktown, Tennessee.

Deponent was forced to give up his nursery business for the reason that the smoke and fumes from said furnaces so injured or destroyed orchards that a sale of fruit trees within the smoke infested locality, which extended throughout Gilmer, Fannin and part of Union counties, could not be made.

E. BUFFINGTON.

Sworn to and subscribed before me this the 10th day of November, 1905.

J. L. WEAVER,

Notary Public of Gilmer County, Georgia.

AFFIDAVIT OF A. E. SHARP, LUMBERMAN.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
County of Gilmer.

Personally appeared, A. E. Sharp, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a lumberman and has been engaged in said business for the past fourteen years, and during said time, while engaged in his business as aforesaid, has inspected considerable timber in the counties of Murray, Gilmer and Fannin, in the State of Georgia.

Up to a very recent date, that is to say, about the year 1902, the forest throughout said counties were as a rule prosperous and healthy, but about 1902 damage to the timber was becoming apparent, which damage has rapidly increased up to the present time. A large amount of the valuable timber in said counties, particularly the hickory, white pine, chestnut oak and chestnut, have been killed. The death of which timber is attributable to no other source than the sulphur fumes generated

by the copper companies near Ducktown, Tennessee. The destruction of timber by the sulphur fumes is well-nigh daily on the increase, and if continued will result in a loss of practically all the timber within Gilmer and Fannin counties, and also the northeastern portion of Murray county. Upon the property personally inspected by deponent thousands of dollars of timber has been destroyed. Not only are the forest trees injured by the sulphur fumes, but the fruit crop has been almost wholly destroyed and the orchards within the scope of said fumes badly injured. If the production of the sulphurous gases continue both the lumber and orchard interest within the section reached by said fumes will soon be entirely destroyed.

A. E. SHARP.

Sworn to and subscribed before me this the 10th day of November, 1905.

E. BUFFINGTON,

Notary Public of Gilmer County, Georgia.

AFFIDAVIT OF J. W. ABERCROMBIE.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,

Fannin County.

Personally appeared, J. W. Abercrombie, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and farmer, residing two miles N. Morganton.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Deponent's crop of cabbage was a failure, tomatoes and potatoes were very sorry, fodder was badly damaged—scarcely a fourth crop raised. Deponent does not grow small grain, the same will not mature, but is light and chaffy. Timber in my section is badly damaged, worse this year than ever before. Deponent's orchard was almost a failure, and was also almost a total failure all over this section of the country.

J. W. ABERCROMBIE.

Sworn to and subscribed before me, this 17th day of November, 1905.

J. W. ALLEN, J. P.
Fannin County, Ga.

AFFIDAVIT OF J. W. ALLEN.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, J. W. Allen, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a resident of Fannin County, Georgia, near the town of Morganton, and has a farm upon Star Creek, in said county.

Deponent has often noticed sulphur fumes during the past two years in said locality, and since said sulphur fumes became noticeable a great amount of timber has died, crops have been very poor and orchards and gardens a failure. During the past spring and summer tomatoes and cabbage could not be grown by deponent upon his said place. On one occasion, immediately after deponent had uncovered a bed of young cabbage sprouts, the sulphur fumes were quite noticeable and upon the following day deponent discovered that his cabbage plants had turned white as though they had experienced a severe frost. The plants were all destroyed.

If the injury from the fumes continues to progress in the future as rapidly as in the past, it will be but a short time before the section of country surrounding deponent's property will be wholly devastated and property values destroyed.

J. W. ALLEN.

Sworn to and subscribed before me, this 18th day of November, 1905.

G. D. NIXON, N. P. and J. P.,
Notary Public Fannin County, Georgia.

AFFIDAVIT OF J. L. ANDERSON.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, J. L. Anderson, who, being duly sworn in the above-styled cause, deposes and says:

The deponent is a resident, citizen and property owner of Fannin County, Georgia, and has a farm in said couty about one mile from Hot House post-office, at which place deponent has resided for the past eight years. The sulphur fumes generated by the copper plants just across the Tennessee line from Fannin county are frequently in evidence in said locality, and since said fumes have made their appearance, great quantities of timber have died, and crops,orchards and gardens have failed. A large percentage of the inhabitants of said region are farmers, depending upon the products of their farms for sustenance, and if said fumes continue, the farmers in said locality can no longer earn their livelihood from their farms. The injury is growing each year, that of the past season being much greater than the injury of the preceding year.

J. L. ANDERSON.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,

Notary Public Fannin County, Ga.

AFFIDAVIT OF JOHN W. ANDERSON.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART, *Plaintiff.*

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, John W. Anderson, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a citizen, resident and property-owner of Fannin county, Georgia, in which county he has lived for the past fifty years. Deponent is a farmer, and has a farm about four miles distant from the town of Mineral Bluff.

Up to the time the Tennessee and Ducktown Copper Companies began operating extensively and producing large quantities of sulphur gases, the locality in which deponent resides was good farming country and the soil was quite productive. Two crops a year were raised, that growing through the winter being of course of the small grain variety. Since the sulphur fumes, however, have become prevalent, not only have enormous quantities of timber been killed, but orchards have been injured and destroyed, fruit crops ruined, gardens become unproductive, and crops generally have failed to some extent. The fumes in said

locality are often strong enough to be disagreeable. Many trees are destroyed along the roadside, thereby rendering passage over the roads not only dangerous, but frequently very difficult by reason of the roadways being blocked or interfered with.

JOHN W. ANDERSON.

Interlined before signing.

J. F. M'NELLY, N. P.

Sworn to and subscribed before me this 18th day of November, 1905.

J. F. M'NELLY,
Notary Public Fannin County, Ga.

AFFIDAVIT OF B. C. ARP.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared B. C. Arp, who being duly sworn in

the above styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and his occupation is that of a farmer, his farm is located three miles north of Blue Ridge, Ga.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Garden was killed by said fumes in a single night during the month of August, 1905. Deponent's garden and pea crop was in a flourishing condition, but after the night in which the smoke settled down in said locality was noticeably strong. Said garden and pea crop were whitened and withered, and had the appearance of having suffered a very heavy frost and in consequence of such injury were utterly ruined.

B. C. ARP.

Sworn to and subscribed before me, this 18th day of November, 1905.

WILLIAM BUTT,

Notary Public Fannin County, Georgia.

AFFIDAVIT OF J. R. BALLOU.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, J. R. Ballou, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a citizen, resident and land owner of Fannin county, Georgia, in which county deponent has lived for the past forty-three years. Deponent is a farmer, his farm being located on Hothouse Creek, about one mile south of Hothouse post-office.

The fumes produced by the copper companies at and near Ducktown, Tennessee, are often present in deponent's locality, and frequently are strong enough to unpleasantly affect many persons, such fumes producing a difficulty in breathing, an irritation in the throat, and sometimes severe coughing spells. Since said fumes became noticeable in said locality, great amounts of timber have died; crops have utterly failed, and orchards and gardens have been rendered well-nigh worthless. This is true not only with corn, peas and melons, but also of winter-growing crops, such as wheat, rye and barley.

The injury in the past season has been very great. Deponent's property is fitted for nothing else than farming, and deponent is dependent upon said farm for his livelihood. Deponent, for a winter-growing crop, has sowed rye upon said farm, but same is already injured by the sulphur fumes, and if said crop is subjected to the fumes throughout the winter, said crop will be greatly injured, if not wholly destroyed.

J. R. BALLOU.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF D. R. BALLEW.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared D. R. Ballew, who being duly sworn in

the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer by occupation, his farm being located three miles north of Blue Ridge, Ga.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Deponent is a road commissioner of said county, whose duty it is as such to see to the safety and well keeping of the public roads within his territory. The timber destroyed, as heretofore set forth, often stands along the roadside and menaces the safety of and free passage over said roads, and it is necessary to have road hands or rather persons continually watch for and cut out such dead and dying timber to keep the roads open and prevent injury to persons passing thereon.

D. R. BALLEW.

Sworn to and subscribed before me, this 18th day of November, 1905.

J. R. CHASTAIN,

United States Commissioner.

AFFIDAVIT OF W. C. BALLEW.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART, *Plaintiff.*

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, W. C. Ballew, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops,

orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

W. C. BALLEW.

Sworn to and subscribed before me, this 20th day of November, 1905.

J. F. M'NELLEY,
Notary Public Fannin County, Ga.

AFFIDAVIT OF J. N. BURNS.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART, *Plaintiff.* *vs.* THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*	In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, J. N. Burns, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

J. N. BURNS.

Sworn to and subscribed before me, this 20th day of November, 1905.

J. F. M'NELLEY,

Notary Public Fannin County, Ga.

AFFIDAVIT OF A. J. BELL.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART, *Plaintiff.*

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

In Equity.

STATE OF GEORGIA,

Fannin County.

Personally appeared, A. J. Bell, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a resident of North Carolina near the boundary line, between the said State and the State of Georgia, and is the owner of a farm in Georgia on Hothouse Creek, as well as property in North Carolina, in the neighborhood of Wolfe Creek.

The sulphur fumes generated by the copper companies at and near Ducktown and McCays, Tennessee, are often in evidence both upon deponent's place in North Carolina and that in Georgia, and much timber upon both places have been killed, and the crops badly injured since said fumes became noticeable in said localities. Practically no small grain, or winter-growing crops can be raised, and oats, wheat, corn, barley and rye have been practically non-productive since said fumes became prevalent.

Up to the time said fumes were diffused over said territory

the farms were fertile, producing two crops a year; that is, such crops as corn, melons, peas, sorghum cane, and the like, for the summer season, and oats, wheat, rye and other winter-growing crops for the other season. Both crops are severely injured and have been failures since said fumes became noticeable. The dead and dying trees along the roadside throughout portions of Fannin county and, as a matter of fact, in North Carolina, often menace the safety of the travelers upon such roads, and in addition frequently block or interfere with passage over said roadways by falling across or upon the same.

A. J. BELL.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,

Notary Public Fannin County, Ga.

AFFIDAVIT OF JAS. A. BRUCE.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared James A. Bruce, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and I am a farmer living on the waters of Hemptown, in the eastern part of county.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops,

orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides, and when the air is from the northwest any individual who suffers from catarrh, in my opinion, is damaged to some extent.

JAS. A. BRUCE.

Sworn to and subscribed before me, this day of November, 1905.

G. D. NIXON, N. P., J. P.,
Fannin County, Georgia.

AFFIDAVIT OF J. M. CARTER.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, J .M. Carter, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, Star Creek, one and a half miles east of Morganton.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Deponent has often noticed sulphur fumes during the past two years in said locality, and since said sulphur fumes became noticeable a great amount of timber has died, crops have been very poor, and orchards and gardens a failure. During the past spring and summer tomatoes and cabbage could not be grown by deponent upon his said place. If the injuries from the fumes continue to progress in the future as rapidly as in the past, it will be but a short time before the section of country will be wholly devastated and property values destroyed.

J. M. CARTER.

Sworn to and subscribed before me, this 17th day of November, 1905.

J. W. ALLEN, J. P.

Fannin County, Ga.

AFFIDAVIT OF A. J. CAYLOR.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, A. J. Caylor, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and has a farm located about five miles from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops,

orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

his
A. J. X CAYLOR.
mark.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF D. J. CHANCE.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, D. J. Chance, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, being located on Hemptown Creek, ten miles east of Blue Ridge, and twenty miles southeast of Isabella, Tenn.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

The smoke is injurious to the vegetation generally; fodder was practically rotten three weeks before ripe. Fruit crops are almost a failure and the timber is greatly damaged, already a large portion is dead. Wheat crop was damaged. I have seen the bean and pea vines killed by said fumes. Also, I believe said fumes does injury to the health of the people.

D. J. CHANCE.

Sworn to and subscribed before me, this 20th day of November, 1905.

JAS. A. BRUCE, J. P.

Fannin County, Ga.

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AFFIDAVIT OF E. J. CHASTAIN, TAX-COLLECTOR GILMER COUNTY.

No. 18. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
County of Gilmer.

Personally appeared, E. J. Chastain, who, being duly sworn in the above styled cause, deposes and says:

Deponent is a resident of Gilmer county, Georgia, and has been for the past thirty-two years, and is at present Tax-Collector of said county, which office he has held for two terms. Deponent is now serving his third year in said capacity.

The duties and rules of the office of Tax-Collector require that he travel throughout the entire county, through its several precincts three times a year, the taxes being paid to deponent upon said trips, and not as is customary in more populous counties, merely at the office of the Tax-collector at the county seat.

Deponent has noticed during the said trips the great destruction of timber. This is especially true of such trees as hickory, chestnut oak and chestnut, but the entire forest appears to be

more or less injured. The destruction of this timber has undoubtedly resulted in a considerable property loss to Gilmer county and her citizens.

The roads in many sections are to a degree rendered unsafe by the dead timber, and often the roads are blocked by fallen dead trees. In fact, in some localities the safety over and free passage upon the roads are preserved only by cutting away the dead trees along the roadside, of which there are at times large numbers. On the last trip of deponent, a major portion of the present week, the same being through the Ducktown section, or eastern portion of Gilmer county, the dead timber along some of the roads was being cut out, of which there was quite a large amount. A portion of one of the main roads in particular, where the dead trees were most in evidence, was quite steep and rendered dangerous not only by the possibility of fallen trees, but also by the fact that should said trees fall across said roadway, they would, in addition, afford dangerous barriers, particularly to those travelers who might use the road at night. This danger was removed only by cutting and destroying such dead trees.

E. J. CHASTAIN.

Sworn to and subscribed before me this 10th day of November, 1905.

E. BUFFINGTON,

Notary Public of Gilmer County, Georgia.

AFFIDAVIT OF J. D. CHASTAIN.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared J. D. Chastain, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, and has a farm located three miles from Blue Ridge.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general injury to the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

J. D. CHASTAIN.

Sworn to and subscribed before me, this 18th day of November, 1905.

[illegible] FORRESTER,
Notary Public Fannin County, Georgia.

AFFIDAVIT OF J. R. CHASTINE.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, J. R. Chastine, who, being duly sworn in the above-styled cause, desposes and says:

Deponent is a resident of Fannin county, Georgia, and lives about five miles to the east of the town of Blue Ridge. Deponent is United States Commissioner, but is also engaged in farming, and was a member of the legislative committee appointed to investigate the damage, if any, being wrought by the fumes generated by the copper companies near Ducktown and Isabella, Tennessee.

Deponent has recently gone over a considerable portion of Fannin county, and practically throughout the entire county damage has been done by said fumes. This injury is greatest along the valley and lower lying lands upon the Toccoa river and its tributaries, and other valleys and hillsides within, or opening into the depression within which the Ducktown works are situated.

Great quantities of timber have been killed, crops have been injured, fruit destroyed and gardens made worthless.

At deponent's residence the smoke and sulphur fumes are frequently to be found. The fumes are discernable not only through their unpleasant odor, but also to the eye, they being often thick enough to produce a haze.

The fumes have already destroyed beyond hope of recovery thousands of dollars' worth of property in Fannin county, and if allowed to continue will practically devastate a considerable portion of said county and totally destroy the value of hundreds of thousands of dollars' worth of property in the State of Georgia.

J. R. CHASTINE.

Sworn to and subscribed before me this 17th day of November, 1905.

WILLIAM BUTT,

Notary Public Fannin County, Ga.

AFFIDAVIT OF O. F. CHASTINE.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, O. F. Chastine, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a citizen of Fannin County, Georgia, and has been for a number of years living in the town of Morganton. In the locality of deponent's residence the fumes are often in evidence, and are strong enough to be extremely disagreeable in odor. Said fumes have not only killed deponent's garden, but even his wife's flowers in the yard, such flowers as sweet peas and others growing upon fragile stalks are particularly susceptible to the fumes.

Deponent is an agent for farming implements and also for life insurance; and by reason of such agencies travels constantly throughout Fannin and the surrounding counties, and the injury by said fumes is apparent over a considerable portion of the

territory which deponent traverses. The injury to timber is exceedingly great, and crops, orchards and gardens generally suffer exceedingly from said fumes. Small grain, such as rye, oats, wheat and the like suffer particular injury. Deponent during the past year had planted upon his place, among other things, cow-peas, sorghum cane and corn, all of which were killed or injured by the sulphur fumes. After the presence of the strong fumes deponent's peas and sorghum cane looked as though they had experienced a severe frostbite. In consequence of the injuries from said sulphur fumes the peas and sorghum cane were wholly destroyed. Deponent's fodder was also utterly ruined.

The injuries from said fumes were much greater during the past year than ever before, and if said fumes continue it will be impossible to raise farm products, not only throughout the section where deponent resides, but over a considerable portion of said county. This is especially true if the fumes are to be increased by the opening of additional smelters.

Deponent further swears that he had the best stands of grass he ever saw (that he had been in the grass business for several years); that some time in June of this year, 1905, one evening deponent noticed that the sulphur fumes were particularly strong. The next morning deponent's grass was burned and withered and had the appearance of having suffered a severe frost. Deponent's grass died and was not cut at all.

O. F. CHASTINE.

Sworn to and subscribed before me, November 17, 1905.

J. M. ALLEN, J. P.,

Notary Public Fannin County, Ga.

AFFIDAVIT OF W. K. CHASTAIN.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART, *Plaintiff.*

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

In Equity.

STATE OF GEORGIA,

Fannin County.

Personally appeared W. K. Chastain, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer and has a farm located 5½ miles from Blue Ridge.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

W. K. CHASTAIN.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Georgia.

AFFIDAVIT OF M. S. CLAYTON, COUNTY SURVEYOR, GILMER COUNTY.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
County of Gilmer.

Personally appeared, M. S. Clayton, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a resident of Gilmer county, Georgia, and is County Surveyor of said county, the duties of which office deponent has performed for about ten years preceding the present time.

The deponent has not only surveyed in Gilmer county, but also in the adjoining counties, the greater portion of which surveying has been for the purpose of locating land and lot lines in the timber districts in North Georgia. Deponent is forty-nine years of age and has always lived in said section, and for a long time past has constantly traversed the territory embraced by Gilmer, Fannin and Murray counties. It was deponent's custom in surveying to pay particular attention and in fact to closely observe the timber along the lines surveyed by him, and as a rule he reported the condition of such timber to the parties for whom he was making such surveys. As a matter of fact, considerable observation of the timber was absolutely necessary in making a survey as lot lines and boundary demarkations are effected throughout said counties as a rule by blazing, and specially marking trees, figures indicating the location of the line and number of the lot being cut in station trees. In fact, practically the only marking throughout the timbered country is by blazed and station trees.

Until about three years ago the forest throughout the territory surveyed by deponent appeared to be in a generally healthy condition, but during the latter part of 1902 many of the trees began apparently to sicken and since that time vast numbers have died. This is especially true of the hickory, chestnut oak and chestnut trees. Forest, generally, however, have been badly injured, in fact, the injury has been so great and the destruction of the trees so widespread that it is almost the exception rather than a rule, when blazed or station trees are to be found.

Throughout the territory heretofore specified, that is in Gilmer, Fannin and in the northeastern portion of Murray county, sulphur fumes generated by the copper plants in the neighborhood of Ducktown, Tennessee, are very noticeable. This is especially true when the wind is in the north.

Deponent has also observed during the past three years, and

especially during 1904 and 1905, that the fruit throughout the territory subject to said copper fumes has failed and through a considerable part of said country the fodder has rotted and the crops are poor.

Deponent is not sufficiently familiar with the exact value of the different timber or of the full scope of the damage to fruit and farm products to state accurately the amount of property that has been destroyed, but it is certain from the destruction witnessed by deponent that many thousand dollars' worth of property have been lost to the State of Georgia and her citizens in the counties of Murray, Gilmer and Fannin.

M. S. CLAYTON.

Sworn to and subscribed before me this —— day of November, 1905.

J. I. WEAVER,

Notary Public Gilmer County, Georgia.

AFFIDAVIT OF J. E. COCHRAN.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
County of Fannin.

Personally appeared, J. E. Cochran, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and deponent is a farmer, his farm is about three miles from Blue Ridge, on the waters of Sugar Creek, and about eight miles from the mines.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides. crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguish-

able by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Gardens are killed in a single day or night; that during the month of July, don't recollect the day, in this year, the smoke came to my farm and soon after it left garden vegetables and melon vines looked as though there had been a killing frost on them, and you could see the effects of it on all farm products, and in two or three days after the smoke had been there the leaves on the trees would die and in a short time fall to the ground like it was in late fall of the year.

J. E. COCHRAN.

Sworn to and subscribed before me, this 20th day of November, 1905.

W. J. MATTHEWS, J. P.
Fannin County, Ga.

AFFIDAVIT OF W. R. COLE.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared before me W. R. Cole, who, being duly sworn herein, deposes and says:

Deponent is a liveryman by occupation, and has been for many years, and spends a considerable portion of his time driving his customers throughout the different parts of Fannin and Gilmer counties, Georgia. Deponent is a resident of Blue Ridge, Fannin County, Ga.

Deponent during the past two or three years, while driving through said counties as aforesaid has observed the great destruction of timber, vegetation and crops within the zone of the sulphur fumes generated by the Ducktown copper companies. The character of the injury to timber first attracted deponent's attention, that is, the browning and burning of the leaves at times, and the falling of same long before the autumn season, and the fact that the trees began dying at the top and that the injury gradually descended. Prior to the notice of such injuries, however, deponent had often observed the presence of said

sulphur fumes throughout a considerable portion of the counties. Such fumes were not only noticeable through their unpleasant odor, but frequently were so thick that they formed in effect a haze in the atmosphere.

The trees killed, as aforesaid, were often a menace to the safety of and passage over the roads throughout said counties. Deponent has frequently found that dead trees had fallen across and blocked the roadways through the timbered country. The dead and dying trees constituted a frequent menace to the travelers using such roads, not only by the danger of the injury to the driver as well as animals and vehicles from the falling trees or limbs, but also as an unexpected obstruction upon the road.

Deponent has had the good fortune not to have driven into such an obstacle, but he attributes such good fortune largely to the fact that the dead trees are usually cut by road hands, or other persons, so as to prevent their blocking or falling upon the roadways. If such trees were not constantly cut and removed, the danger upon said roads, as well as the inconvenience, would be infinitely greater than it is.

Deponent has often noticed the sulphur fumes in various portions of Fannin and Gilmer counties. The smoke and fumes are often thick enough to produce a haze, and deponent has seen such fumes so dense in the northern part of Fannin county, particularly late in the afternoon, that they resembled a heavy mist or fog, and objects only a few yards distant were barely discernible. The fumes are often strong enough to produce a severe smarting sensation in the throat and nostrils and produce considerable coughing. This is particularly true in the case of customers of deponent who are not accustomed to said fumes, as more than once deponent has had a passenger to temporarily suffer severely from the unpleasant effects of said sulphur smoke.

his
W. R. X COLE.
mark.

Sworn to and subscribed before me, this day of November, 1905.

W. A. WILSON, J. P.,
Notary Public Fannin County, Ga.

AFFFIDAVIT OF ROBERT M. COLE.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART, *Plaintiff.*

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

In Equity.

STATE OF GEORGIA,
County of Fannin.

Personally appeared, Robert M. Cole, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, lives on Fighting Town Creek, nine miles west of Blue Ridge, and four miles south of the Tennessee Copper Company furnaces.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides. crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops,

orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

That the damage has been greater this year than heretofore, that the smoke came up this summer and deponent's garden was almost ruined, and it killed his Irish potatoes, and we did not get anything from them.

ROBERT M. COLE.

Sworn to and subscribed before me, this 21st day of November, 1905.

W. J. MATTHEWS, J. P.
Fannin County, Ga.

AFFIDAVIT OF W. B. COLE.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, W. B. Cole, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, and has a farm four miles from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

W. B. COLE.

Sworn to and subscribed before me, this 20th day of November, 1905.

FRED FORRESTER,

Notary Public Fannin County, Ga.

AFFIDAVIT OF J. E. COOK.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
County of Fannin.

Personally appeared J. E. Cook, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a farmer residing near Hemp P. O., Fannin County, Georgia, in which county deponent has lived for the past thirty-one years.

Deponent's farm is located upon Hemptown Creek, a tributary of the Toccoa river, some little distance to the southward of Mineral Bluff, Ga., and up to a very recent date has been both fertile and productive. During the past year or so, however, conditions have greatly changed. The smoke and sulphur fumes generated by the copper works, just over the Tennessee line and near Ducktown and Isabella, Tennessee, have almost wholly destroyed the value of his property as a farm; often, in fact, whenever the wind is from the northward, the fumes envelope the neighborhood, are disagreeable in odor and

settle upon the earth like a cloud or mist, and the growing crops are stunted, injured, and frequently killed. The damage during 1905 was much greater than in 1904—each year it is increasing. A greater portion of the timber has already been destroyed; orchards are much damaged and non-productive. Notwithstanding the fact that the past season was excellent as far as rain and weather was concerned, the crops were woeful failures. The corn and fodder at least six weeks before the first frost looked blighted and as though frost-bitten. The fodder rotted on the stalk before it was ripe for gathering. The small grain crops are also injured.

These conditions are attributable to no other source than the sulphur fumes. If the fumes continue in the future as they have in the past, deponent's farm will be of no value, as practically nothing can be raised thereon. Only broomsage seems able to stand the sulphur fumes.

The conditions related by deponent do not apply to deponent's farm alone, but also to those in his neighborhood not protected by hills or mountain barriers from said smoke and fumes.

The conditions set forth and the damage related are general. Continued operation of said copper works will in effect work nothing short of a confiscation of deponent's property, as it will be rendered worthless to him as a farm and valueless in the market.

JOHN E. COOK.

Sworn to and subscribed before me, this 20th day of November, 1905.

JOS. A. BRUCE, J. P.
Fannin County, Ga.

AFFIDAVIT OF JOE COOK.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, Joe Cook, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and farmer, residing near Hurst, five miles south of Morganton, Ga.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Deponent's corn crop was badly damaged, the fodder burnt up and rotted long before the corn matured. Gardens were almost a failure. Timber died considerably this year, worse than ever before. Small grain was badly damaged and did not more than half mature. The small grain was generally very light and chaffy. Smoke can be easily seen and smelt frequently at my house. I live about 18 to 20 miles from the Ducktown furnaces.

JOE COOK.

Sworn to and subscribed before me, this 17th day of November, 1905.

J. W. ALLEN, J. P.
Fannin County, Ga.

AFFIDAVIT OF JOSEPH M. COOK.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, Joseph M. Cook, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, being located on Hemptown Creek, ten miles east of Blue Ridge, and twenty miles southeast of Isabella, Tenn.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Fruit crop almost a failure, fodder was only worth half price; timber is dying, a large portion already dead. So far as rain and good weather was concerned, we had an excellent season for farming.

J. M. COOK.

Sworn to and subscribed before me, this 20th day of November, 1905.

_____,

Notary Public County, Ga.

AFFIDAVIT OF JOHN C. CORDELL.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, John C. Cordell, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a resident, citizen and property owner of Fannin County, Georgia, in which county he has lived the past 43 years. Deponent is a farmer, located about four miles from the town of Mineral Bluff, and in deponent's locality the fumes produced by the sulphur plants in Tennessee, just beyond the line of Fannin county, are frequently present. Since the appearance of said sulphur fumes in deponent's neighborhood, quantities of timber have been killed, and crops, gardens and orchards practically ruined. The land in said locality is suitable only for farming and forestry purposes, and with the crops destroyed and the timber killed by said fumes, the land is rapidly becoming valueless. The winter-growing crops, such as oats, barley and

the like, are greatly injured by the fumes. Each and all of the injuries are constantly on the increase.

JOHN C. CORDELL.

Sworn to and subscribed before me, this 18th day of November, 1905.

F. M. HARPER, J. P.,
Notary Public Fannin County, Ga.

AFFIDAVIT OF J. L. CULBERSON.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, J. L. Culberson, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State

and county, and has a farm located six miles from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

J. L. CULBERSON.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF J. Y. CURTIS.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared J. Y. Curtis, who being duly sworn in the above styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and his occupation is that of a farmer; his farm is located one mile north of Blue Ridge, Ga., on the waters of Toccoa.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguish-

able by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Crop of corn was killed by said fumes in a single night. During the month of August, 1905, deponent's crop of corn was in a flourishing condition, but a night in which the smoke settled down in said locality, and was noticeably strong, the crop of corn was whitened and withered, and had the appearance of a heavy frost. In consequence of such injuries said crop of corn was almost ruined.

J. Y. CURTIS.

Sworn to and subscribed before me, this 17th day of November, 1905.

WILLIAM BUTT,

Notary Public Fannin County, Georgia.

AFFIDAVIT OF A. B. DAVIS.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, A. B. Davis, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, and has a farm located one-half mile from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

A. B. DAVIS.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF JOHN E. DAVIS.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART, *Plaintiff.*

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, Rev. John E. Davis, who, being duly sworn in the above styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and County, and resident of Morganton, Georgia, and farmer, whose farm is located five miles southeast of Morganton.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Deponent's crop was damaged considerably and his timber is dying. Fodder was almost a total failure, notwithstanding the season was good. Deponent has noticed other crops and they also were damaged as deponent's. Fodder would die while the shuck was green. Corn is chaffy and light. Crops have suffered more this year than ever before. If the fumes continue farming in this county will have to be abandoned.

JOHN E. DAVIS.

Sworn to and subscribed before me, this 17th day of November, 1905.

J. W. ALLEN, J. P.,
Fannin County, Georgia.

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AFFIDAVIT OF W. A. DAVES.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,

Fannin County.

Personally appeared W. A. Daves, ordinary of Fannin county, Georgia, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and farmer and resident of said county, five miles east of Morganton, Ga.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguish-

able by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Deponent further swears that the crops of general character, that is, corn, rye, oats, etc., the fodder crops, especially, began to rot before and about the time corn was tasseling and silking. Notwithstanding the season was good, better than usual, so long as the fumes are generated, deponent's corn will be almost a total failure. The damage this present year was greater than ever before, and deponent verily believes his farm will ultimately be wholly ruined if said furnaces continue. Deponent had not been in his timber lands for quite awhile. On yesterday, November 16th, I went out to get some square timber and was very much surprised to find that his timber was largely dead and balance dying. The timber was very fine.

W. A. DAVES.

Sworn to and subscribed before me, this 17th day of November, 1905.

J. W. ALLEN,

J. P. Fannin County, Georgia.

AFFIDAVIT OF S. A. DEAN.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, S. A. Dean, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops,

orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

S. A. DEAN.

Sworn to and subscribed before me, this 20th day of November, 1905.

J. F. M'NELLEY,
Notary Public Fannin County, Ga.

AFFIDAVIT OF W. H. DAVENPORT.

No. 18. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared W. H. Davenport, who being duly sworn in the above styled and numbered cause, deposes and says:

Deponent is a resident citizen of State and county, and is a farmer.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

My Irish potatoes, tomatoes and bunch beans were ruined on account of smoke and stubble such as rag weeds, cockle-burs and other stubble was killed just as if there had been a big frost on it.

W. H. DAVENPORT.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Georgia.

AFFIDAVIT OF A. B. DICKEY.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART, *Plaintiff.*

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, A. B. Dickey, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a resident, citizen and property owner of Fannin county, Georgia, and lives upon his farm on Hothouse Creek, about two and one-half miles north of Mineral Bluff. The sulphur fumes generated by the copper companies at and near Ducktown and McCays, Tennessee, are often exceedingly strong in deponent's neighborhood. Not only are the fumes sensible to smell and sight, but they are even strong enough to be tasted, and are in evidence a considerable portion of the time.

These fumes bite down crops and general vegetation in a manner similar to a severe frost. For the past three years deponent's crops have been greatly injured, and each year the injury is greater than that of the year preceding. The small grain, such as wheat, oats and rye, has suffered particularly heavy damage.

The locality in which deponent resides is especially adapted for farming, the soil being productive, and up to the time sulphur fumes made their appearance, the land made excellent returns to the farmers; two crops are raised a year, small grain, that is, wheat, rye and the like, being sowed for winter. This crop which is now coming up has already been badly injured by the sulphur fumes. The grain can in a measure recover from the injury already done, if the fumes are not continued, but if the crop is to be subjected throughout the winter and spring to the fumes, the grain will most assuredly be destroyed.

During the past season what little late corn there was produced upon deponent's farm was shriveled and shrunken as to grain, the heart of the kernel being blackened and the fodder upon the stalk of said corn had rotted and was well-nigh worthless. In addition, deponent's garden was badly injured and fruit much damaged.

During the month of July his garden was in a single day killed down as though it had experienced a severe frost. No such injuries as these happened upon deponent's place prior to the institution of the plants of the Tennessee Copper Company and the Ducktown Copper Company. Deponent has resided in the said county for the past sixty-one years.

The safety of the roads in said locality are often menaced by dead and dying trees along the roadside. Upon the main roads the safety and free passage are, in a measure, protected by the constant cutting of the dead timber by road hands, or the parties under the direction of the County Road Commissioners or overseers, but upon the mill or meeting roads, and the roads not watched by the Road Commissioners, falling timber is frequent; the roads often blocked and the passage thereover rendered both difficult and dangerous.

The smoke and sulphur fumes from said copper works in deponent's locality are often exceedingly unpleasant, producing coughing, and in the instance of deponent's daughter who suffered with weak lungs, almost suffocation. When the fumes lie heavy, particularly in rainy weather, and at other times when

the wind is in deponent's direction from said furnaces, deponent's daughter is forced to remain close indoors in order to breathe with any degree of comfort whatsoever.

A. B. DICKEY.

Sworn to and subscribed before me this 18th day of November, 1905.

J. F. M'NULTY,
Notary Public Fannin County, Ga.

AFFIDAVIT OF J. P. DILLARD.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, J. P. Dillard, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State

and county, and is a farmer, and has a farm located three miles from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

his
J. P. X DILLARD.
mark.

Sworn to and subscribed before me, this 18th day of November, 1905.

I RED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF W. K. DILLARD.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, W. K. Dillard, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, and has a farm located three miles from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

W. K. DILLARD.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF HORACE M. ELLINGTON, NURSERYMAN.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART, *Plaintiff.*

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

In Equity.

STATE OF GEORGIA,
County of Gilmer.

Personally appeared, H. M. Ellington, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is at present postmaster at Ellijay, Ga., which office he has held for about a year past; prior to that time deponent was in the nursery business, having nurseries located in Gilmer county, Georgia. Since the inauguration of the present copper plants near Ducktown, Tennessee, and as a result of the sulphurous gases generated by such plant, said gases absolutely destroying the fruit crops in many localities and injuring and killing the orchards, defendant's business has been greatly injured, the sales of said nursery products being largely confined to counties within the scope of the injurious effects of the sulphurous fumes.

HORACE M. ELLINGTON.

Sworn to and subscribed to before me this the 10th day of November, 1905.

E. BUFFINGTON, C. N. P.,
Notary Public of Gilmer County, Georgia.

AFFIDAVIT OF M. FARMER.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, M. Farmer, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a resident of Fannin County, Georgia, in which county he has lived for the past thirty-nine years and is a farmer, his farm being located about one mile north of Mineral Bluff.

The fumes produced by the copper companies at and near Ducktown are often present and very strong in deponent's locality. These fumes are not only disagreeable in odor, but produce irritating effects in the throat and frequently considerable coughing; they are particularly disagreeable to any person whose lungs are weak, as they result in suffocating sensations.

In the locality in which deponent resides a large per cent. of all the timber has been killed; crops have been ruined, orchards have failed and gardens proved well-nigh worthless since said

fumes first made their appearance. The injuries in said locality are constantly increasing; those for the past year being much greater than ever before.

Deponent has often noted dead and dying timber along the roadside, and the safety of, and passage over, said roads are menaced by the trees which have been killed or injured. Were it not for the fact that along the principal roads the dead and dying timber is watched for and kept cut out, the danger and inconvenience would be much greater, and along the mill and meeting routes and roads seldom used, frequent inconvenience is caused by said roads being blocked, in whole or in part, by the trees which have fallen on or across the same.

The greater number of people in deponent's locality are farmers, dependent upon the products of their farm for their livelihood, and many, like deponent, notwithstanding their crops had already been injured, have replanted for the next crop in hopes that conditions would be better, as without such crops the farmers thereabout would have no income whatsoever. Deponent has now planted and growing wheat and rye upon his farm, but the same has already suffered injurious effects from said fumes, and will, if subjected to the fumes in the future, be greatly injured, if not wholly destroyed. If, however, said crops are not interfered with by said fumes, fair returns may be expected therefrom, notwithstanding the fact that some injury has already been done to same by said sulphur fumes.

M. FARMER.

Sworn to and subscribed before me this day of November, 1905.

J. F. M'NELLY,
Notary Public Fannin County, Ga.

AFFIDAVIT OF HORACE A. FIELD.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
County of Gilmer.

Personally appeared, Horace A. Field, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is 44 years of age, and is a resident of Ellijay, Gilmer County, Georgia. His occupation is that of a lumberman, having had many years' experience in the lumber woods and forests of Pennsylvania and the Adirondack Mountains of New York and elsewhere, and is familiar with timber in its various stages.

During the month of October, 1905, deponent carried his camera with him on an inspection of timber in the timber section north of Ellijay, Georgia, and took the pictures hereto attached, marked IX, X, XI, XII, XIII, XIV, and XV, which pictures were taken at the localities hereinafter specified, and disclosing conditions as follows:

The location of view contained in picture No. IX is near the

town of Ellijay, Georgia, on the south side of the Cartecay river, the picture being of a hill-side, facing northward toward the Ducktown furnaces, and not immediately protected from said sulphur fumes by any intervening hills or mountains. As will be seen from the picture, practically all the taller trees have been wholly killed and the smaller trees and underbrush are beginning to suffer. The distance from Ducktown is about thirty miles in direct line.

Picture No. X is of the same locality, and on the opposite side of Cartecay river from that of picture No. IX; the timber in picture No. X, however, being upon the side of the hill opposite to the Ducktown works and protected from the sulphur fumes by intervening barriers, is fairly healthy, and no such conditions there exist as is shown in No. IX.

Picture No. XI is taken within a comparatively short distance of the town of Ellijay, and up a ravine in the line traveled by the fumes from Ducktown. Most of the taller trees, as shown by the picture, are dead or dying, and practically all of the remaining taller timber, as well as a considerable portion of the smaller undergrowth, is injured.

Picture No. XII was taken on lot 171 in the 7th district and 2d section, Gilmer County, on the waters of Rock Creek, same being something over twenty miles from the Ducktown works, and about five miles northeast of the town of Whitepath. This picture shows the destruction of the major portion of all timber in said section, other than the undergrowth, which appears to have been protected to a degree by the surrounding taller trees.

Picture No. XIII was taken on lot 122 in the 7th district, 2d section of Fannin County, Georgia, about the same distance as the preceding picture from Ducktown, and about two miles south of the town of Toccoa. This picture illustrates the death of the major portion of the taller timber in said vicinity.

Picture No. XIV is taken from land lot 120 on the top of Rocky Mountain, about eighteen miles distant from the copper works. In the distance, the sulphurous smoke from the copper

plants is visible, even through the hazy atmosphere. This picture shows the total destruction of the trees on the mountainside, facing the valley running from Ducktown. The smoke was clearly traceable from the furnaces to the highlands and mountains to the eastward, toward which the winds were blowing at the time.

Picture No. XV is also taken from the Rocky Mountain, and is down the valley toward the Ducktown works. Even with a camera wholly unfitted for long distance views, the condition of the timber is apparent. A greater portion of the timber has already been killed, as a close examination of the picture discloses, and that which has not already been killed is badly injured, and is rapidly dying. The mountain from which this picture is taken is nearly 4,000 feet high and commands an unobstructed view towards Ducktown. Deponent's camera could not bring out the destruction of the vegetation toward Ducktown, and the fact that the fields, farms and forests had the appearance of a desert waste, while the territory in the opposite direction, protected from Ducktown by a mountain range, looked fertile and productive. The valley and depression toward Ducktown, as well as the valleys radiating from same, appeared burned, barren and desolate, and wholly unlike the country on the opposite side of Rocky Mountain, which seemed fertile and was more or less green.

HORACE A. FIELD.

Sworn to and subscribed before me, this 23d day of November, 1905.

J. L. MOORE,

Notary Public Gilmer County, Ga.

AFFIDAVIT OF JOHN A. FORTNER.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared John A. Fortner, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, his farm being on the waters of Hothouse Creek.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguish-

able by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

When the wind is in the northwest the smoke ascends over on my farm and causes me and family to cough and have severe headache and some times to vomit on the account of smoke and fumes that we inhale in the lungs. There is so much timber killed on my land that it is dangerous to be in the forest in time of wind and the road is often impassable on account of falling timber that is killed by smoke; the sulphur fumes in some way kills the land to some extent so it does not produce as it should.

JOHN A. FORTNER.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,

Notary Public Fannin County, Ga.

AFFIDAVT OF FRED FORRESTER.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, Fred Forrester, who, being duly sworn in the above-styled cause, deposes and says :

Deponent is a citizen and resident of Fannin county, Georgia, and has a farm in said county about two and a half miles distant from Mineral Bluff. Since the appearance of the sulphur fumes in said vicinity, a great amount of timber has been destroyed, and crops and gardens generally have failed. Deponent had a very good orchard at his said place, but he has received no fruit therefrom this year; in fact, all the vegetation has been greatly injured or wholly destroyed since the fumes became prevalent in said neighborhood.

FRED FORRESTER.

Sworn to and subscribed before me, this day of November, 1905.

F. M. HARPER, J. P.,
Notary Public Fannin County, Ga.

AFFIDAVIT OF W. H. FOSTER.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Gilmer County.

Personally appeared, W. H. Foster, who, being duly sworn in the above-stated case, deposes and says:

Deponent is a resident of Gilmer county, and has been for twenty years or more, having been sheriff of said county for two terms, that is to say, four years.

Deponent made frequent trips throughout Gilmer county, especially during his term as sheriff, and has done considerable lumber hauling for a number of years. In the course of deponent's travels in and about Gilmer county he paid special attention to the timber, the same being not only of considerable interest to the county, but also a matter of business interest to deponent, through lumber hauling as aforesaid.

Up to the summer of 1902 deponent observed the general healthiness of timber throughout Gilmer county, but that since said time much of the timber has died. This is especially true

of hickory, chestnut and chestnut oak. Deponent heretofore owned land lots Nos. 49 and 60 in the Eleventh District and second section of Gilmer county, between twenty-five and thirty miles from Ducktown, Tennessee.

Deponent has often noticed the odor of sulphur smoke and fumes in said locality, and about the summer of 1903 deponent observed that the hickory, and chestnut trees upon said lots were dying rapidly. When deponent sold lot No. 60 only a few weeks ago, in going over the property deponent failed to see any live hickory or chestnut whatever. All had been killed and the timber generally injured. As before stated deponent has often noticed the smoke and sulphur fumes in said locality and can attribute the death of the trees to no other source. The same conditions as those upon the property owned by him, as to the timber, exists over a considerable portion of said county subject to the sulphur fumes. Deponent has not observed such conditions, however, in that portion of northern Georgia shut off or protected by mountain ranges from the Ducktown Copper Works.

W. H. FOSTER.

Sworn to and subscribed before me this —— day of November, 1905.

E. BUFFINGTON, C. N. P.,
Notary Public Gilmer County, Georgia.

AFFIDAVIT OF J. W. GAREN.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared J. W. Garen, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops,

orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

J. W. GAREN.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Georgia.

AFFIDAVIT OF J. H. GIBBS.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared J. H. Gibbs, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State

and county, and is a farmer and has a farm located two miles from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

My garden and truck patches was ruined by smoke and it did not stay on more than two hours. This was in July, 1905. My peas was all ruined and my stubble consisting of rag weeds and cockle-burs and other vegetation of stubble land was killed just as if a big frost had been on it.

his
J. H. X GIBBS.
mark.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Georgia.

AFFIDAVIT OF CHAS. E. GILBERTSON.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART, *Plaintiff.*

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, Chas. E. Gilbertson, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen in said State and county, and superintendent Blue Ridge Tannery, Mineral Bluff, Ga.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops,

orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

CHAS. E. GILBERTSON.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF W. M. GRANTHAM.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, W. M. Grantham, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and merchant and farmer, residing at Hemp, 3½ miles east of Morganton.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Deponent's corn crop was badly damaged, at least one-quarter. Fodder was a failure, garden vegetables were damaged one-half. Deponent has operated a thresher for several years—threshed almost all over the county this year. The crops of wheat, oats and rye were less than half of previous years (the season for this year was as good as any previous), and the grain was lighter and more chaffy than ever before. In traveling over the county I found that the timber was all being killed and was killed; orchards were almost a total failure. Farming in this county will have to be abandoned unless the sulphur fumes are controlled and not allowed to spread over our country.

W. M. GRANTHAM.

Sworn to and subscribed before me, this 17th day of November, 1905.

J. A. ALLEN, J. P.,
Fannin County, Ga.

AFFIDAVIT OF STEPHEN GRIFFIN.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared Stephen Griffin, who, being duly sworn in the above styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and his occupation is that of a farmer; his farm is located one-half mile south of Blue Ridge, Ga.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Crops of peas was destroyed in a single night. During the month of July, 1905, deponent's crop of peas was in a flourishing condition, but after a night in which smoke had settled down in said locality and was noticeably strong, was whitened and withered and had the appearance of having suffered a heavy frost, and in consequence of such injury was utterly ruined.

STEPHEN GRIFFIN.

Sworn to and subscribed before me, this 17th day of November, 1905.

WILLIAM BUTT,

Notary Public Fannin County, Georgia.

AFFIDAVIT OF F. M. HARPER.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, F. M. Harper, who, being duly sworn in the above styled cause, deposes and says:

Deponent is a farmer, property-owner, and citizen of Fannin county, Georgia, and is engaged in farming in said county; deponent's farm being about four miles northwest of the town of Mineral Bluff.

Deponent's property has suffered greatly from the sulphur fumes generated by the copper companies at and near Ducktown, Tennessee. These fumes are constantly in evidence in deponent's locality, and since said fumes have made their appearance all timber upon said deponent's property is either dead or badly injured and in a practically dying condition. Deponent's crops have been well-nigh, if not wholly ruined, his fruit destroyed and the trees in his orchard killed. The injuries during the past year are infinitely worse than those at any time previous. The odor of said smoke is disagreeable—pro-

duces coughing, and is generally unpleasant. During the past year, in the month of July, after a single night of heavy fumes, the garden vegetables, such as beans, potatoes and others, and even rag weeds, would be shriveled and burned. The result was about the same as though a severe frost had fallen and the appearance was almost identical; vegetables and leaves turned white and withered, and the odor of the burnt and blistered vegetables and weeds, especially of the rag weeds, was very strong at said time. Watermelons and pumpkins were wholly ruined.

The timber throughout said locality has been killed with great rapidity. Often the dead trees along the roadside constitute a menace to the passers thereupon. In the locality where all the timber has been killed and the vegetation practically destroyed, the roads wash very badly, there being frequent holes, gulleys and unsafe places occasioned thereby. The fact that there is no vegetation to hold the soil or to restrain the water as it runs down the hillsides is responsible for this condition and for the exceptional damage to the roads. This is especially true of those roads in the northern part of the county and in the locality of said furnaces.

Deponent is a Road Commissioner of said county, whose duty it is to see to the safety of said roads as well as their condition. The facts heretofore recited add greatly to the expense in the maintenance of said roads, as well as the difficulty of keeping said roads in repair. The conditions are much more difficult and arduous than those existing prior to the extensive operations of the Tennessee and Ducktown Copper Companies.

Deponent has been a resident of said county for forty-eight years, and knows that these conditions did not exist until the appearance of the sulphur fumes generated by the present companies.

F. M. HARPER.

Sworn to and subscribed before me this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

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AFFIDAVIT OF WILLIAM HARPER.

No. 18. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, William Harper, who, being duly sworn in the above-styled cause, desposes and says:

Deponent is a resident, citizen and property-owner of Fannin county, Georgia, wherein deponent has lived practically all of the ninety-four years of his past life.

Up to the time the fumes generated by the Tennessee Copper Company and the Ducktown Sulphur, Copper and Iron Company became prevalent in deponent's locality the land was fertile and productive, and made good returns to the owners thereof; two crops per year were produced, the winter-growing crops consisting mainly of small grain.

Since the sulphur fumes have become frequent in said locality, conditions have changed, and not only has the timber been destroyed, but farms have been almost wholly ruined. Where deponent customarily obtained upon one piece of ground over a thousand bushels of corn per annum, deponent can not now

make twenty per cent. of same, and what corn there is produced is injured and defective, and the fodder from the stalks thereof is largely rotten and almost worthless. The entire neighborhood has suffered in the manner recited, the injury being general and by no means confined to deponent. These injuries never existed until the operations of the Tennessee Copper Company and the Ducktown Company within the past few years. The injuries are increasing each year, and the worth of the farms decreasing in proportion.

If the sulphur gases are produced in the future, as in the past, farming property throughout deponent's neighborhood will be rendered absolutely valueless, as no returns can be obtained from the ground, nor will same have a market value.

WILLIAM HARPER.

Sworn to and subscribed before me this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF J. P. HENSON.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, J. P. Henson, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county and is a farmer, and has a farm three miles from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

his
J. B. X HENSON.
mark.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF S. L. HENSON.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, S. L. Henson, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, and has a farm three miles from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

his
S. L. X HENSON.
mark.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF W. S. HENSON.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Gilmer County.

Personally appeared, W. S. Henson, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is 38 years old, and has resided in Gilmer county, Georgia, during his entire life. Is a farmer, and has been Road Commissioner for the past two years, and has been road overseer off and on for ten years previous to this.

Picture filed herewith and marked No. 101 was partially on my land, same being original land lot No. 131 and 130 in the 11th district and 2d section of Gilmer County, Ga., which lies some three miles southeast of Ellijay, Georgia. This timber has died in the last two or three years and principally in the last year. As Road Commissioner this past summer and spring I gave the road overseer orders to cut a great deal of this dead timber down to prevent its falling on the public highway which

runs through said lots of land, and much of this timber was cut down by said order or the picture would have shown more dead timber than what it does. Several trees had fallen across and blocked this highway, and complaint had been made in one instance by a party passing along the highway that a tree had just fallen and had nearly caught him as he passed along the public highway.

Deponent has often seen and smelt the sulphurous-laden smoke that often drifts over and settles in this country whenever the atmosphere is about right and the prevailing winds are from the north, or from the direction of Ducktown. Deponent believes that this wholesale destruction of timber is caused by the fumes and gases from the copper furnaces and smelters of the copper plants located at and near Isabella, Polk County, Tennessee. As these fumes have been noticed much more often in the last year or two, during which time the timber has suffered the greatest. Deponent has particularly noticed that the greatest destruction of timber always occurs on the side of the hill or country which is most exposed towards Ducktown, and that sections of country often, where protected by hill or mountain that the timber so protected would show little or no damage.

The above death of timber has occurred only since the fumes from the copper works made their appearance in the community where deponent resides.

W. S. HENSON.

Sworn to and subscribed before me, this the 21st day of November, 1905.

E. BUFFINGTON, C. N. P.,
Notary Public, Gilmer County, Ga.

AFFIDAVIT OF T. G. HUDSON, COMMISSIONER OF AGRICULTURE OF GEORGIA.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
COUNTY OF FULTON.

Now comes T. G. Hudson, who, being duly sworn herein, on oath says:

That he is the Commissioner of Agriculture of the State of Georgia and one of the committee appointed under a resolution of the General Assembly of Georgia to investigate and report upon the damage done within the State of Georgia by sulphur and copper fumes generated by the copper works at and near Ducktown, Tennessee.

Affiant carefully investigated conditions occasioned by the smoke and fumes generated by said copper companies, which investigation disclosed that said smoke, fumes, and gases had done and were doing enormous injury within the State of Georgia. Timber, crops, gardens, and orchards had been and were

being destroyed, and it was clearly apparent that the zone subject to the hurtful influence of such fumes was rapidly, in fact almost daily, being enlarged, and the damage in the locality already subject to the fumes constantly increasing.

The smoke, fumes, and gases causing the damage are originated by the Ducktown Sulphur, Copper and Iron Company and the Tennessee Copper Company, the latter, however, being located much nearer the Georgia line and producing by far the largest amount of copper, causes the larger part of the injury.

The Tennessee Copper Company has recently removed its reducing plant to a point some miles nearer the Georgia line than its former location, and the gases being concentrated and discharged from a tall chimney are carried much farther into Georgia territory than they could have been formerly under the open-heap process of reducing ore.

The Tennessee Copper Company also has in course of erection additional furnaces, which affiant is informed will double the capacity of said works. If such furnaces are permitted to operate, the damage to the State of Georgia and her territory will be greatly increased, and affiant believes more than doubled in amount and territory affected.

Affiant hereto attaches a copy of the report submitted by affiant and his fellow-commissioners, which report affiant avers to be true in substance and in fact.

Land in the State of Georgia since the time the Tennessee Copper Company began its operation has been constantly increasing in value. This is particularly true of farm lands which have increased within the past five years from 50 to 100 per cent., taken as a whole, and in many instances the increase has been much greater. By reason of the greater value of land for agricultural purposes, much wild lands have been improved and placed in cultivation, there being constant decrease in wild lands and increase in the amount of land improved for agricultural purposes. This is not true, however, in the case of Murray county, within a radius affected by the sulphur fumes. Instead of the amount of wild land within said county decreasing, it has steadily increased for several years.

Affiant can see no reason for this abandonment of improved lands, except the fact that the sulphur fumes render same either unfit for cultivation, or so unproductive that the time and labor expended thereon would bring no returns.

The conditions as to the increase of wild land in Gilmer county is by no means so marked as in Murray, the latter county being much closer to the copper company plants, but if the fumes continue, affiant believes that the conditions in Murray county will soon be almost parallel with those of Fannin county.

T. G. HUDSON.

Sworn to and subscribed before me, this 20th day of November, 1905.

W. H. HARRISON,
Notary Public Fulton County, Georgia.

Atlanta, Ga., August 30, 1905.

To His Excellency J. M. Terrell, Governor of Georgia.

SIR: We, the commission appointed under and acting by authority of a joint resolution of the General Assembly of this State at its last session, and approved by Your Excellency, beg to report as follows:

Said resolution provided that this commission promptly investigate the damage done and now being done to vegetation, timber, fruit, and the farming interests of the northern part of this State by the gases, fumes and smoke being generated by the copper plants at and near Isabella, Polk County, Tennessee, and report to Your Excellency the conditions found there. Pursuant to the above, this commission did visit the above-named section on the 28th and 29th of August and inspected a consid-

erable portion of said territory. We found conditions there alarming in the extreme, and we haven't words at our command to impress on Your Excellency the instant, urgent, and imperative need of immediate action for relief, if that part of our State is to be saved to its present owners and our commonwealth.

The signal destruction to young and old timber and almost all vegetation was appalling in the extreme, and impressed all as we journeyed through the stricken district. From the high ridges, where a view could be gotten of the landscape and surrounding country, much of the foliage was brown and seared and had much the appearance of having been visited by fire or heavy frost, the leaves being more or less brown or seared. In the woods the leaves are falling, or have fallen, and the ground is covered thick with withered and dead leaves, as one would expect to find in late November did healthy conditions prevail. Many of the crops we found on the land were more or less affected; corn, field peas, potatoes, and many hardy weeds showed only too plainly the effects of the action of the fumes. It is our unanimous opinion that the new process as adopted by the Tennessee Copper Company is proving and has proven far more injurious to vegetation, fruit, farming, and the timber interests of this portion of our State than the old process ever was. This is clearly proven by the timber, much of which put out in full leaf in the Spring, and this has been killed since. When the open-roast heaps were used under the old process, they were located near Ducktown, and the sulphurous gases were largely liberated there. Since the adoption of the new method by the Tennessee Copper Company they have located their furnaces for the smelting of the green sulphur ores at Isabella, some four miles nearer the territory of this State.

The present furnaces, with their forced draft and very high heat, drive the fumes and gases from the sulphur ore high into the air, so that the prevailing winds carry and drift them in whichever direction they may be blowing at the time. These concentrated fumes leave the furnace stack in the form of sulphur dioxid or anhydrous sulphurous oxid. This is carried

by the currents of air and the wind to a greater or less distance, according to the velocity of the wind or the humidity or lightness of the air, and is turned into deadly sulphurous acid whenever it happens to come in contact with moisture in the air, and is thus precipitated in this form to the earth, settling on the soil and all growing vegetation.

We find the effects of this highly corrosive and dangerous compound on the dead foliage, and it is burned, blistered and seared as if by extreme heat or heavy frost. As these smelters are now conducted, they are daily and nightly handling hundreds of tons of these ores, containing a very high per cent. of sulphur; and as each pound of sulphur burned produces two pounds of sulphur dioxid, it is very easy to see the magnitude of this evil that is hourly and daily being turned loose in the surrounding country, to blight and kill all growing crops and vegetation.

It has been satisfactorily proven by the Bureau of Chemistry of the United States Department of Agriculture that one part of sulphur dioxid mixed with one hundred thousand parts of air does great damage to vegetation, and also that one part of sulphur dioxid mixed with one million parts of air seriously injures vegetation, if it be exposed for any length of time. This has been thoroughly demonstrated by other chemists and biologists who have worked on the subject, among them being A. Stockhardt and A. Wieler.

The citizens and farmers of the stricken district met us everywhere on our way and begged and implored us to use our effort for their immediate relief and related instance after instance of the loss of their crops. Many expressed themselves as being fully determined to abandon their further attempts to grow crops on their lands until the nuisance be abated. The counties now affected are Fannin, Gilmer, Union, Murray, and Towns, in order named, and we have been reliably informed that the damage to timber has been plainly traced into Rabun county, some seventy miles distant from the smelters.

The section being affected is a very important one to the whole country, it being a great watershed, where many of the

important rivers of the South have their source; and it lies in the heart of the proposed Appalachian forest reserve. It is a section of country where nature has been more lavish in her gifts; where grow the giant poplar, the sturdy and massive oaks, the stately and majestic white pine, the lacy hemlock, the chestnut, hickory, buckeye, and numerous other forest giants, fringed with innumerable other trees and bushes, ferns and mosses, all making a great sponge, or an ideal nature's fountain. Here are absorbed the rains and showers that fall, and are held in this great natural reservoir to gently percolate through all, in the form of numerous clear and cold springs, which unite in little rills and rivulets. These form brooks, which dash and flow over rocks and boulders on their way to form the creeks, and they in turn the rivers. The banks of these streams are covered with laurel and rhododendron, mountain azaleas, holly, calicanthus, dogwood, and other flowering shrubs. These beautiful streams, cool, clear, and limpid, coming direct from nature's fount, are purity itself. Herein sport the lovely brook trout; and, in streams that have been stocked by the United States Government, the Rocky Mountain or rainbow trout are thriving and increasing in great numbers. It is this fair country on which the hand of this awful scourge is laid so heavily, and it will be not only the inhabitants and owners of these lands who will suffer, but all the country to which its streams are tributary and through which they pass on their way to the ocean. Since these poisonous gases kill not only the old and matured timbers, but all the vegetation on the ground, nature's fount will be thereby ruined. The sun will get in and parch and dry up the hungry earth so that it will become baked and seared. The water will run off as fast as it falls, producing periods of tremendous freshets and floods, followed by long and far-reaching droughts; for the rain falling then, not held back as formerly, when it slowly made its way through the thick mass of foliage and rich, spongy earth, will pass off like a cloudburst down the denuded and parched courses. Until recently the streams of this watershed have had the most even flow of any in the United States, which the complete destruction

of these forests will disturb entirely, besides rendering useless all the valuable water power operating cotton mills and other industries on the rivers below.

This commission advised the attorneys of the Tennessee Copper Company of their intended visit to their section and works, and did visit their offices at Isabella and asked for any suggestion that the company might have to make as to provision that they were making or had in view to relieve the situation, but they got no definite information from their manager, Mr. Adams, whom we saw there. We found the Tennessee Copper Company are using all possible energy to push to early completion four new furnaces to smelt green ore at Isabella, and since they are now using only three furnaces, it is plain to see what will be the result when these four additional furnaces are blown in, on green sulphur ore, with no provision whatever that we could learn of to care for these increased fumes. In the words of the previous commission who investigated this nuisance and were appointed by a former General Assembly and approved by your Excellency, we beg to repeat, "in our opinion, it being better that this entire industry should be completely annihilated than that the present intolerable condition should continue."

Wherefore, we respectfully recommend that your Excellency, through the Attorney-General, and in the name of the State, do immediately begin proper legal proceedings to abate said nuisance and to arrest the damage now being done to the property of the citizens of this commonwealth.

A number of photographs representing certain scenes in the district described are herewith submitted.

Respectfully submitted.

(Signed) T. G. HUDSON,
Commissioner of Agriculture.
W. S. YEATES,
State Geologist.
JNO. M. M'CANDLESS,
State Chemist.
WILL H. SHIPPEN.
J. R. CHASTAIN.

AFFIDAVIT OF W. T. HUNTER.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, W. T. Hunter, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, and has a farm located four miles from Ducktown.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

W. T. HUNTER.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF J. N. HYDE.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared J. N. Hyde, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a Road Commissioner of said county.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

I find that the roads are much more trouble to keep up than formerly, that there is dead timber along the road to cut to keep up, and that the road overseer has to keep a man to cut same off of right of way of roads.

J. N. HYDE.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Georgia.

AFFIDAVIT OF W. C. HYDE.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared W. C. Hyde, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer and has a farm located five miles from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

I had a good bean crop ruined in one day during the month of July, 1905. My potatoes were injured, my garden also injured. This was in the month of July, 1905. I have often seen the public road obstructed by falling timber. I never saw the public road obstructed this way before the Ducktown smoke came here. I do not consider the public roads safe for travel after night without the road overseer has a special man to look after the dead timber.

W. C. HYDE.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Georgia.

AFFIDAVIT OF D. T. JARRETT.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
County of Gilmer.

Personally appeared, D. T. Jarrett, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a resident of Gilmer county, Georgia, and has been since the year 1861. Deponent resides in the tenth District, second section, Gilmer county, Georgia, being in the northern central portion of said county.

In deponent's section of Gilmer county, the sulphur fumes generated by the copper works near Ducktown and Isabella, Tennessee, are not only apparent by reason of their odor, but are at times easily distinguished in the atmosphere, the smoke and fumes at times being strong enough to have the appearance of a haze.

Throughout deponent's section of country a large amount of the hickory, chestnut oak, white pine and chestnut have been killed and the timber generally injured. The orchards gener-

ally have failed and the fruit trees have suffered considerable damage. The damage during 1905 was considerably greater than that during the year previous. Should the destruction continue in the future in proportion to what it has been in the past the timber and fruit of said locality will soon be completely destroyed.

D. T. JARRETT.

Sworn to and subscribed before me this 10th day of November, 1905.

E. BUFFINGTON, C. N. P.,
Notary Public of Gilmer County, Georgia.

AFFIDAVIT OF L. V. KING.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared L. V. King, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and farmer, residing two miles north of Morganton, Ga.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Deponent resides near T. J. Wilson, and knows of the facts stated in his affidavit, the same being read to deponent. During the month of June, 1905, deponent left home at two o'clock in the morning. The smoke and fumes were very strong and continued throughout the day. The day following peas, corn and potatoes were badly injured. Not more than a half crop was gathered. The season was good. Fodder was a failure; had appearance after the fumes came down of having been through a severe frost. I wagoned considerably during Winter and Spring. The roads were washed out in holes and gullies, more especially in the direction of Ducktown. The roads in the north part of the country are generally in this condition. Dead trees have fallen in the road and deponent was compelled to leave the public road twice on that account. Timber along the roads are dead and dying.

L. V. KING.

Sworn to and subscribed before me, this 17th day of November, 1905.

G. D. NIXON, N. P., J. P.
Fannin County, Georgia.

AFFIDAVIT OF W. P. LEDFORD.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared W. P. Ledford, who being duly sworn in the above styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, and has a farm 3½ miles from Ducktown.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguish-

able by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

I had a fine orchard and it is now ruined. My timber is all ruined. I can not raise any potatoes or any small grain, as the smoke kills it all, and can not raise peas or beans.

W. P. LEDFORD.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,

Notary Public Fannin County, Georgia.

AFFIDAVIT OF W. B. LOVINGOOD.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART, *Plaintiff.*

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared W. B. Lovingood, who being duly sworn in the above styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, farm on Toccoa river.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops,

orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Garden partly killed and injured in June and July by said fumes in year 1905. Said garden was in a flourishing condition, but after a night in which smoke settled down in said locality and was noticeably strong, said garden was whitened and withered and had the appearance of having suffered a heavy frost and in consequence of such injury the garden was almost ruined. Could taste fumes on beans when prepared for table use; tomatoes utterly ruined; corn crop badly injured; killed the fodder, thereby injuring the ears of corn, making corn very light and chaffy.

W. B. LOVINGOOD.

Sworn to and subscribed before me, this 17th day of November, 1905.

J. B. KINCAID,
Clerk S. C. Fannin County, Georgia.

AFFIDAVIT OF W. M. MADDERSON.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared W. M. Madderson, who being duly sworn in the above styled and numbered cause, deposes and says:

Deponent is a resident citizen of Tennessee and land owner in said State of Georgia and county, and farmer, and has a farm located seven miles from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

The deponent is a citizen of Tennessee, but has farm in Fannin county, Georgia.

his
W. M. X MADDERSON.
mark.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Georgia.

AFFIDAVIT OF R. L. MEDARIS.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared R. L. Medaris, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and farmer residing three miles east of Morganton, Ga.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Deponent's timber was badly damaged and killed by the fumes from the Ducktown copper mines, that he has traveled quite a lot throughout the country and finds the timber killed and dying more or less everywhere. The roads are washed out in gullies and holes in portions of the county; out more in the northern portion, nearer the mines where the timber is totally killed. Deponent's crop was almost a failure, corn was badly damaged, fodder was almost a total failure, besides other products were considerably damaged, about one-quarter to one-half crop being raised. The season was far better than last year. The fumes were worse this year than ever before.

R. L. MEDARIS.

Sworn to and subscribed before me, this 17th day of November, 1905.

G. D. NIXON, N. P., J. P.,
Fannin County, Georgia.

AFFIDAVIT OF JEFF. T. MEDEARIS.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, Jeff T. Medearis, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and a resident of Hemp, Ga., three miles east of Morganton, and a farmer.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguish-

able by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Deponent says his timber is killed and dying. That his crop of corn and small grain was damaged almost totally. Garden truck such as beans and cabbage, tomatoes, etc., was almost a total failure. Deponent's orchard is almost killed. If the fumes continue another year the orchard will be totally lost. If said fumes are not stopped farming in this section will necessarily have to be abandoned. Deponent has quit trying to raise wheat and oats on account of the fumes.

J. T. MEDEARIS.

Sworn to and subscribed before me, this 17th day of November, 1905.

J. W. ALLEN, J. P.,
Fannin County, Georgia.

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AFFIDAVIIT OF A. F. MULL.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART, *Plaintiff.*

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, A. F. Mull, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and has a farm located about two and a half miles from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops.

orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

A. F. MULL.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF BRUCE MULL.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, Bruce Mull, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen in said State and county, and is a farmer.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

I am a road overseer in said county. I have to keep a constant lookout for dead timber and have had a lot cut out, and have had to go off the road limit to cut some.

BRUCE MULL.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF P. C. MULL.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared P. C. Mull, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer and has a farm located 1½ miles from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

P. C. MULL.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Georgia.

AFFIDAVIT OF N. S. MULL.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, N. S. Mull, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, and has a farm located two miles from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

N. S. MULL.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF W. D. MULL.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, W. D. Mull, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a farmer in Fannin County, Georgia, and a citizen, resident and land owner of said county, deponent's farm being about six miles from the town of Blue Ridge, in said county.

In deponent's locality the sulphur fumes generated by the Ducktown Copper Companies are often noticeable and strong. Up to the time said fumes became prevalent in deponent's locality deponent had excellent timber upon his property, but since the appearance of said fumes, practically all of deponent's timber has been destroyed. A considerable amount was killed during the past year, in fact, practically all that had not been previously killed, and during the months of June or July of the

past summer the dead and fallen leaves were as thick as in the fall, and the woods at any time in the mid-summer could have been burned. The timber along the road-side is often killed and injured, and but for the fact that the dead and dying timber is frequently cut and removed, the roads would be rendered impassable. Even with every precaution, the roads are frequently rendered unsafe, as well as inconvenient, by the timber which has been killed in close proximity thereto.

W. D. MULL.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF JOHN I. NEWTON.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, John I. Newton, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops,

orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

JOHN I. NEWTON.

Sworn to and subscribed before me, this 20th day of November, 1905.

J. F. M'NELLEY,
Notary Public Fannin County, Ga.

AFFIDAVIT OF E. H. NEWTON.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, E. H. Newton, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a resident, citizen and land-owner of Fannin county, Georgia, residing at Mineral Bluff, and in and around the locality of deponent's home the sulphur fumes generated by the Ducktown Copper Companies are often in evidence.

Since said fumes became apparent throughout the country much timber has died and crops generally have failed, and often the leaves upon the trees not already killed are scorched and deadened by mid-summer and fall, and are as thick upon the ground as in the late fall. The injury continues to grow with each succeeding year, that of 1905 being much greater than at any time previous.

E. H. NEWTON.

Sworn to and subscribed before me this 18th day of November, 1905.

J. F. M'NELLY,
Notary Public Fannin County, Ga.

AFFIDAVIT OF R. W. NICHOLS.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, R. W. Nichols, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a merchant, four miles east of Morganton, Georgia.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops,

orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

R. W. NICHOLS.

Sworn to and subscribed before me, this 17th day of November, 1905.

J. W. ALLEN, J. P.
Fannin County, Ga.

AFFIDAVIT OF G. D. NIXON.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART, *Plaintiff.*

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, G. D. Nixon, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a farmer, citizen and property owner, living upon Star Creek, a tributary of the Toccoa River, about two and one-half miles west of the town of Morganton, Fannin county, Georgia.

In deponent's neighborhood the injury to timber within the last two years has been very great and large quantities have been killed. The fumes from the copper works near Ducktown are often present in said locality and discernable not only by their odor, which is by no means pleasant, but to the eye as well, the smoke and fumes producing a haze or cloud.

Since the sulphur fumes began to settle in the locality of the Star Creek crops, crops have been failures, orchards non-productive, and gardens of little use; corn would be badly injured before the fodder could mature, and frequently after the sulphur fumes had been specially noticeable, which was the case when the wind was in the north, the blades upon the corn would be turned white as if it had suffered a frost. During the past year this was the case at least a month before time for fodder to mature, and it withered long before the first frost. The injury to small grain is very great; winter growing crops (small grain, that is, wheat, rye, barley and the like) are heavy sufferers. The damage this year was infinitely greater than that of the year previous.

G. D. NIXON.

Sworn to and subscribed before me this day of November, 1905.

J. W. ALLEN, J. P.,
Fannin County, Ga.

AFFIDAVIT OF G. D. NIXON.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, G. D. Nixon, who is a farmer, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and who is a farmer, his farm being located eight miles east of Blue Ridge, Ga.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguish-

able by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Deponent is a road overseer of said county, whose duty it is as such to see to the safety and well-keeping of the public roads within his territory. The timber destroyed as hereto set forth often stands along the roadside and menaces the safety of and free passage over said roads, and it is necessary to have road hands or other persons continually watching for and cutting out such dead and dying timber to keep the road open, and prevent injury to persons passing thereon.

G. D. NIXON.

Sworn to and subscribed before me, this 20th day of November, 1905.

J. R. CHASTAIN,

Notary Public Fannin County, Ga.

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AFFIDAVIT OF W. I. PENLAND.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, W. I. Penland, who, being duly sworn, in the above-styled cause, deposes and says:

Deponent is a citizen and resident of Fannin county, Georgia, and a farmer and land owner therein. Deponent's farm is about 3½ miles from the town of Morganton, Georgia, and in the locality of deponent's farm a great amount of timber has been killed, crops have failed and gardens are poor since the appearance of the fumes from the Ducktown Copper Company's plants in said locality. Fruit in said locality has been almost totally destroyed, and what little the orchards produced was of an inferior quality and much injured.

Much timber is killed along the roadways, and the dead and dying trees frequently render passage over the roads unsafe and inconvenient. Such trees have to be cut away from the

roadside, in order to keep the roads open, and lessen the danger to travelers thereon.

W. I. PENLAND.

Sworn to and subscribed before me this 17th day of November, 1905.

JOHN F. M'NELLY,
Notary Public Fannin County, Georgia.

AFFIDAVIT OF G. W. PHILLIPS.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
County of Fannin.

Personally appeared, G. W. Phillips, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and merchant and farmer, lives on Fighting Town Creek, ten miles west of Blue Ridge, and five miles south of Ducktown mines.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides. crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

And that the damage has been a great deal worse in this present year than it ever had before.

GEO. W. PHILLIPS.

Sworn to and subscribed before me, this 21st day of November, 1905.

W. J. MATHEWS, J. P.

Fannin County, Ga.

AFFIDAVIT OF J. C. POWELL.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, J. C. Powell, who, being duly sworn in the above-styled cause, on oath, says:

Deponent is a resident of Fannin County, Georgia, and until a few months ago was engaged in merchandising in the town of Morganton, said county, where deponent still resides.

The sulphur fumes generated by the copper companies near Ducktown, Tennessee, are frequently in evidence in the locality where deponent resides. Not only is the presence of said fumes made known by their offensive odors, but often are so thick that they produce a hazy appearance in the atmosphere.

Since said fumes have become noticeable, very large quantities of timber have died, orchards formerly productive have ceased to bear, crops have suffered and gardens have failed. This deponent knows both from experience and observation, as

deponent's timber, crops and garden have been among those to suffer from said sulphur fumes.

J. C. POWELL.

Sworn to and subscribed before me, this 17th day of November, 1905.

J. W. ALLEN,
Notary Public Fannin County, Ga.

AFFIDAVIT OF SIDNEY L. RICHARDS.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, Sidney L. Richards, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and County, and farmer resident of Hemp, three miles east of Morganton.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Deponent's corn crop was damaged and small grain was almost a failure. That produced was light and chaffy. Fodder was a total failure, caused from the sulphur fumes from the mines at Ducktown. The apple and peach crop was also a failure in my section of the country. The season this year was better than that of last year. Timber is dying badly in my section, and if the fumes are permitted and continue next year, as this, almost all the timber will be killed. Peas and potatoes and cabbage was a failure, turnips and other garden vegetables were a failure. The fumes were worse this year than ever before.

S. L. RICHARDS.

Sworn to and subscribed before me, this 17th day of November, 1905.

J. W. ALLEN, J. P.
Fannin County, Ga.

AFFIDAVIT OF W. E. ROGERS.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared W. E. Rogers, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a farmer living in Fannin county, Georgia, between the towns of Blue Ridge and Morganton, and within the territory subjected to the sulphur fumes generated by the copper companies near Ducktown, Tennessee.

A large amount of deponent's timber has been killed, and some crops have even been destroyed in the short space of a single night. Within the past season deponent had five acres planted in melons, which for a time appeared to flourish. One Monday night (the exact date deponent does not remember) the sulphur fumes were especially strong, and on Tuesday the leaves upon deponent's melons vines were dead, and immediately afterwards the vines died and the crop was wholly destroyed.

If the injury from the fumes continue to progress, it will be

but a short time before deponent's timber will be all destroyed and his cleared lands rendered unfit for farming purposes.

W. E. ROGERS.

Sworn to and subscribed before me, this day of November, 1905.

WILLIAM BUTT,
Notary Public Fannin County, Ga.

AFFIDAVIT OF G. ROSS.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
County of Fannin.

Personally appeared G. Ross, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer and has a farm located 2½ miles from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

G. ROSS.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Georgia.

AFFIDAVIT OF J. H. ROSS.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, J. H. Ross, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, and has a farm located half a mile from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

his
J. H. X ROSS.
mark.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF ABNER SEABOLT.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, Thomas Seabolt, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and resident of Morganton and a farmer.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Deponent says his cabbage, corn and fodder were ruined by the sulphur fumes; that his timber is dying from the effects of the fumes. Unless said fumes are stopped farming in this section will have to be abandoned, as they can not make a living out of it. Last year I had a fine garden; this year I did not make anything scarcely, although the season was better than last year. Deponent has often seen and smelt the fumes from Ducktown mines; has seen smoke so thick at his home he could scarcely see any distance. He is well acquainted with the fumes, having worked at Ducktown in the mines.

his
THOMAS X SEABOLT.
mark.

Sworn to and subscribed before me, this 17th day of November, 1905.

J. W. ALLEN, J. P.,
Notary Public Fannin County, Georgia.

AFFIDAVIT OF FRANK E. SHIPPEN, LUMBERMAN.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
County of Gilmer.

Personally appeared, Frank E. Shippen, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is Secretary and Superintendent of the Shippen Bros. Lumber Company, a corporation of the State of Georgia, which company is a successor of Shippen Bros., and also of the Evans Land and Lumber Company.

The main plant of said Shippen Bros. Lumber Company is located at Ellijay, Georgia, and its timber lands in Gilmer, Murray, Fannin, Union and Towns counties, Georgia, the major portion being in the three first named counties.

Deponent has been engaged in the lumber business for sixteen years, and has been located in Gilmer county, Georgia, for eight years, coming to said locality as a member of the firm of Shippen Bros.

Shippen Bros. Lumber Co. is the owner in fee of 65,000 acres

of land and 33,000 acres of timber in the counties of Murray, Gilmer, Fannin, Union and Towns, 12,000 acres of the land owned in fee being located in the two last named counties, and the remainder in Gilmer, Murray and Fannin counties.

There has been expended in the plant, machinery and sawmills owned by said company the sum of $143,000.00, and said company owns timber land and timber of the value of $600,000.00, a total in the excess of three-quarters of a million dollars.

Shippen Bros. Lumber Company is employing approximately two hundred and eighty-five men, and has a pay-roll of between nine and ten thousand dollars per month. There are at present 108 teams of horses, mules and oxen employed in hauling timber for the said firm.

Deponent has personally inspected much of the forests owned by said company. Up to about three years ago the forests owned by said company were apparently healthy and the trees normal, but during the latter part of 1902 and the beginning of 1903 an unhealthy condition was becoming apparent in certain localities near the Ducktown territory and along water courses radiating therefrom. This was especially true in the case of hickory, white pine, chestnut and chestnut oak. Since said time the unhealthy condition has spread rapidly and a large amount of timber has died. Frequent inspections have been made, which have disclosed the fact that all timber within the range of the sulphurous fumes of the Ducktown copper companies is rapidly being killed by such fumes. A considerable amount of the timber belonging to said lumber company has already been killed or injured. Nearly all of its timber is within the hurtful influence of said fumes, or will shortly be if the gases produced in the future as it is at present. The territory subject to such fumes being daily enlarged. In fact, both the damage being wrought and the scope of said harmful influence of the fumes is growing and will continue to grow with the continued production of said gases.

Upon the property of Shippen Bros. Lumber Co. alone the sulphur fumes have killed more than $75,000.00 worth of tim-

ber, and has injured a large amount in addition, which damage and injury is being added to daily by the continued operation of said works. So rapidly is the timber being destroyed that should the injury keep pace with that done during the past two years, but a short time will be required to destroy practically the entire timber interest of said lumber company, and drive it out of business. Should new works at the copper plants be operated, doubling the capacity for producing said harmful gases, the result would be that the damage and ruin would be more quickly wrought and the utter destruction of the property of Shippen Bros. Lumber Co. much more speedily accomplished. Not only will the timber of said company be destroyed, but its plant will be rendered well-nigh valueless by reason of the failure of material to supply the same and consequently its various employees will be thrown out of their employment.

Under normal conditions the timber interest owned by said company is ample to afford a continuous supply of lumber for said company. Only mature timber is cut, that is to say, timber fourteen or more inches in diameter. The forests are not destroyed by cutting of such timber, but, on the contrary, where this method is followed new crops of timber may be had from time to time, the young timber growing much more rapidly after the old timber is cut away. The sulphur fumes, however, not only destroy the mature timber, but kills the young as well, and make re-forestation impossible. Under existing conditions and with the continued productions of said sulphur fumes, the greater portion of Fannin, Gilmer and northeastern part of Murray counties will be wholly denuded of forest and the lumbering industries in such localities utterly destroyed.

FRANK E. SHIPPEN.

Sworn to and subscribed before me this 10th day of November, 1905.

E. BUFFINGTON,

Notary Public of Gilmer County, Georgia.

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AFFIDAVIT OF L. C. SMITH.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared L. C. Smith, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and his occupation that of a farmer, his farm located five miles east from Blue Ridge, Ga.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Garden was killed by said fumes in a single night. During the month of July or August, 1905, deponent's garden was in a flourishing condition, but after a night in which smoke settled down in said locality and was noticeably strong, the garden was whitened and withered and had the appearance of having suffered a heavy frost, and, in consequence of such injury, most everything in said garden was utterly destroyed.

L. C. SMITH.

Sworn to and subscribed before me, this 18th day of November, 1905.

WILLIAM BUTT,
Notary Public Fannin County, Georgia.

AFFIDAVIT OF J. P. STYLES.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART, *Plaintiff.*

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

In Equity.

STATE OF GEORGIA,
County of Fannin.

Personally appeared, J. P. Styles, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and a farmer, his farm being located on waters of Fighting Town Creek, about eight miles west of Blue Ridge, and five miles south of Ducktown mines.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides. crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguish-

able by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

J. P. STYLES.

Sworn to and subscribed before me, this 21st day of November, 1905.

W. J. MATTHEWS, J. P.
Fannin County, Ga.

AFFIDAVIT OF E. H. THOMAS.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared E. H. Thomas, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and his occupation is that of a farmer, his farm is located four miles west of Blue Ridge, Ga., on the waters of Sugar Creek.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguish-

able by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Crop of Irish potatoes was killed by said fumes in a single night during the month of August, 1905. Deponent's crop of Irish potatoes was in a flourishing condition and were in bloom, but after a night in which the smoke settled down in said locality and was noticeably strong, the crop of Irish potatoes were whitened and withered and had the appearance of having suffered a heavy frost and in consequence of such injuries were utterly ruined.

E. H. THOMAS.

Sworn to and subscribed before me, this 18th day of November, 1905.

WILLIAM BUTT,

Notary Public Fannin County, Georgia.

AFFIDAVIT OF C. J. TRAMMELL.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared C. J. Trammell, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and his occupation is that of a farmer and a saw mill man, his farm is located two miles south of Blue Ridge, Ga., on the waters of Cherry Log.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguish-

able by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Garden was killed by said fumes in a single night during the month of August, 1905. Deponent's garden having been in a flourishing condition, but after a night in which smoke had settled down in said locality and was noticeably strong, the said garden was whitened and withered and had the appearance of having suffered a heavy frost and in consequence of such injury was utterly ruined. Deponent's crop of corn and rye was injured fully one-half during the year 1905. Fodder was burned up by the fumes and the corn was withered.

C. J. TRAMMELL.

Sworn to and subscribed before me, this 18th day of November, 1905.

WILLIAM BUTT,
Notary Public Fannin County, Georgia.

AFFIDAVIT OF J. H. TWIGGS.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
County of Fannin.

Personally appeared J. H. Twiggs, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and a farmer; resides seven miles from Blue Ridge on Fighting Town Creek.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides. crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops,

orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

J. H. TWIGGS.

Sworn to and subscribed before me, this 21st day of November, 1905.

W. J. MATHEWS, J. P.,
Fannin County, Ga.

AFFIDAVIT OF JOSEPH P. VESTEL.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
County of Fannin.

Personally appeared, Joseph P. Vestel, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a sawmill man and farmer. Has lands all located in said county.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides. crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

That deponent owns about five thousand acres of land in said county, and that the damage seems to get worse every year, and deponent lives about three miles from the furnaces of the Tennessee Copper Co. furnaces.

J. P. VESTEL.

Sworn to and subscribed before me, this 21st day of November, 1905.

W. J. MATHEWS, J. P.
Fannin County, Ga.

AFFIDAVIT OF E. W. WILSON.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared E. W. Wilson, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen in said State and county, and is a road overseer in said county.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

I have to keep a constant lookout for dead timber and have cut a lot and have to go outside of road, leave it and cut timber. The end of my road nearest Ducktown washes much more than it did some years ago when there was plenty of timber on said road. The smoke has been so strong at my residence, six miles from Ducktown, that it has given me severe coughing spells.

E. W. WILSON.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,

Notary Public Fannin County, Georgia.

AFFIDAVIT OF THOMAS J. WILSON.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, Thomas J. Wilson, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a citizen and resident of Fannin county, Georgia, in which county he has lived for forty-nine years, and is engaged in farming seven miles north of the town of Blue Ridge.

Of recent years gases and fumes generated by the copper companies at and near Ducktown and McCays, Tennessee, have made their appearance in deponent's locality. These fumes are often strong, producing coughing and difficult breathing; they often settle down in the form of a haze or mist, and at such times the vegetation suffers greatly, in fact, gardens are bitten down by said fumes as though by a heavy frost—crops are injured, and melons and pumpkins and other farm products wholly destroyed. The damage during the past year has been greater than ever before.

The section in which deponent resides is a good farming country, and has heretofore, and until the presence of said sulphur fumes, produced good crops. Since the appearance of said sulphur fumes the crops have suffered more each year. Among the products of said locality are wheat, rye and the usual small grain which grows throughout the winter and spring. These crops already show damage from the sulphur fumes, and if the same are produced throughout the winter, such crops will be well-nigh, if not wholly, total failures. If still greater amounts of sulphur be produced, practically nothing at all in the way of vegetable life can be maintained within said locality.

Deponent is a Road Commissioner of said county, in which he has lived for forty-nine years. The safety of the roads and free passage thereover is only maintained by the constant watching for and cutting out the timber killed by the sulphur fumes. This is only done upon the main roads, as the county has not sufficient hands to cut away the timber upon the meeting or mill roads, or roads other than the main public thoroughfares.

As a result of the death of the vegetation, the roads are frequently injured, holes and gulleys, and well-nigh impassable washouts being made therein by reason of the fact that the hill and mountain sides are bare, there being no vegetation to restrain or take up the water precipitated thereon, the same running off as rapidly as it falls, and causing freshets and flooding of creeks, gullies and branches in said locality.

Deponent fully believes that if the smoke and fumes continue even for a limited time longer the property in said region will be rendered well-nigh valueless, as it is suitable for nothing except for farming or forestry purposes, and said fumes make both of these impossible.

THOS. J. WILSON.

Sworn to an subscribed before me this day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF L. A. WINKLER.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, L. A. Winkler, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, and has a farm four miles from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

his
L. A. X WINKLER.
mark.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF JOHN WISE.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, John Wise, who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, being located about twelve miles east of Blue Ridge, and twenty-two miles southeast of Isabella, Tenn.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

The smoke is injurious to the vegetation generally; fodder was rotten three weeks before ripe. Fruit crops are almost a failure, and I have seen the timber killed in the months of July and August twenty-two or twenty-three miles east of Isabella. Wheat crop is almost a failure, and I have seen the bean and pea vines killed by said sulphur fumes, and it is injurious to the health of the people.

J. C. WISE.

Sworn to and subscribed before me, this 20th day of November, 1905.

R. L. WEAVER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF J. M. WITHROW.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, J. M. Withrow, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a resident of the State of North Carolina, just over the Georgia line, and has a farm adjoining his place of residence of some six hundred (600) acres on the Georgia side in Fannin county. Deponent has resided in said locality since 1846.

In the neighborhood of deponent's residence and said farm the fumes generated by the copper companies in the neighborhood of Ducktown, Tennessee, are often apparent, both by their odor as well as to the eye, said fumes frequently occasioning a haze in the atmosphere. Since the appearance of said fumes in the neighborhood, a large amount of timber has been utterly destroyed, the trees dying more rapidly each year. Crops and gardens have failed and orchards have been greatly injured. The winter growing crops, such as wheat, rye and the like, suffer

great injury. The fumes from said copper plants are rapidly rendering the farming interest in said neighborhood well-nigh valueless, and if same are to be continued, farming will have to cease, by reason of the injury to the crops.

J. M. WITHROW.

Sworn to and subscribed before me this day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF W. J. WITT.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, W. J. Witt, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer and has a farm 2½ miles from Mineral Bluff.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

W. J. WITT.

Sworn to and subscribed before me, this 18th day of November, 1905.

FRED FORRESTER,
Notary Public Fannin County, Ga.

AFFIDAVIT OF RICHARD WOLFORK.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared, Richard Wolfork, who, being duly sworn in the above-styled cause, deposes and says:

Deponent is a farmer, and also a mail contractor and rider from Hothouse to Mineral Bluff, in said county, deponent's farm being located a short distance from Hothouse post-office.

Not only in the immediate locality of deponent's farm, but often upon the roads between Hothouse and Mineral Bluff and elsewhere are the fumes generated by the copper companies at and near Ducktown, Tennessee, both strong and disagreeable.

Since said fumes became prevalent in said locality, a great amount of timber has been killed, as well as many trees along the roadsides. The top of the trees usually die first, the injury gradually extending towards the roots, and frequently said trees break about half way from the top and fall upon, or across the

roadsides. They are often heavy enough to kill a man or horse, or both, should they strike them in falling. The roads are rendered often unsafe by the dead and dying timber, and are sometimes blocked or interfered with by fallen trees. The conditions would be still more dangerous, but for the fact that in many localities where the destruction of timber is greatest, the roadsides are watched for dead or dying trees, and the same are cut out in order to preserve the safety of, and passage over the roads.

In localities where all the timber has been destroyed as well as much vegetation, the lands wash badly. This is particularly true in the hilly portions and other than the valleys. A considerable portion of said country is steep and sloping. There being nothing to retain or obstruct the water, it runs off almost as rapidly as the same falls upon the ground, and the roads especially suffer from this condition, and are badly washed and frequently rendered dangerous in consequence thereof. In addition, the roads require infinitely greater care and attention, and are much more trouble and expense to keep in repair than roads in localities not subject to such conditions.

Throughout deponent's locality a crop of small grain is raised by a majority of the farmers yearly, that is, wheat, oats, rye, barley, or other winter-growing crops, but since the appearance of said fumes such crops have been unproductive. Deponent has now growing upon his place, wheat and rye, but the same already shows injuries of the sulphur fumes, and if said fumes continue as they are at present, said crop will be badly injured, if not wholly destroyed.

RICHARD WOLFORK.

Sworn to and subscribed before me this —— day of November, 1905.

J. F. M'NELLY,

Notary Public Fannin County, Georgia.

AFFIDAVIT OF R. W. WOODY.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART, *Plaintiff.*

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared R. W. Woody, who being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident citizen and land owner in said State and county, and is a farmer, his farm located on the waters of Noontootla, twenty miles south of Blue Ridge, Ga.

During the past two or three years great quantities of timber have been killed within the locality in which deponent resides, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the copper plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of a haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponent resides.

Crop of Irish potatoes was killed in a single night during the month of June. Said crop was in a flourishing condition, but the night in which smoke settled down on said locality, and was noticeably strong. Said Irish potatoes withered and had the appearance of having suffered a heavy frost, and in consequence were utterly ruined.

R. W. WOODY.

Sworn to and subscribed before me, this 17th day of November, 1905.

WILLIAM BUTT,
Notary Public Fannin County, Georgia.

AFFIDAVIT OF WILLIAM A. WRIGHT.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fulton County.

Personally appeared, William A. Wright, who, being duly sworn in the above styled and numbered cause, on oath says:

Deponent is Comptroller-General of the State of Georgia, and has been for the past twenty-six years, and as such official has in his charge and custody, among other things, the official records of the State showing the improved lands and wild lands within the several counties of said State, which records of such improved and wild lands are compiled by deponent and in his office.

The wild lands in the counties bounded by the Tennessee line, and immediately adjacent to the Ducktown region, that is to say the counties of Murray, Fannin and Union, as shown by the records in deponent's office are as follows:

In the county of Fannin, in the year 1903, there were 70,181

acres of wild land. In the year 1904 there were 77,0[illegible]2 acres of wild land, an increase of 6,871 acres over the year previous. In 1905 there were 88,323 acres of wild land, an increase over 1904 of 11,271 acres, or 18,142 acres increase for the years 1904 and 1905.

In Murray county there were 57,601 acres of wild land in the year 1903, and 59,321 acres in 1904, or an increase of 1,720 acres. There were 68,325 acres of wild land in 1905, an increase of 9,004 acres, or a total of 10,724 acres increase for the years 1904 and 1905.

There were 49,552 acres of wild land in Union county in 1903; there were 68,077 acres in 1905, or an increase of 18,525 acres.

The total increase of wild lands within said three counties within the past two years amount to 47,391 acres, the greater portion of the increase being within the past year, there being an increase of 11,171 acres in Fannin, 9,004 in Murray, and the total amount specified by Union county was an increase over 1904, there being 49,552 acres of wild land in 1903, 41,403 in 1904, and 68,077 in 1905.

Towns county, which also adjoins the Tennessee line and the Ducktown region, has retrograded in the matter of improved lands, there being less in 1905 than in 1903.

The counties of the State of Georgia adjoining the counties of Murray, Fannin and Union (excluding Towns on the extreme east, which is also a border county) are Catoosa, Walker, Whitfield, Gordon, Gilmer, Pickens, Lumpkin and White; with the exception of Whitfield which has lost 533 acres of improved lands from the amount cultivated in 1903, and Lumpkin, which has lost 4,123 acres, each of said counties has increased in the amount of lands improved and decreased in amount of wild lands within said counties. The acreage of wild land in Catoosa county for 1903 was 2,549; Walker, 34,640; Gordon 20,466; Gilmer, 45,632; Pickens, 11,265, and White 38,164. In 1905 the amount of wild land in said counties was respectively Catoosa, 2,016; Walker, 32,303; Gordon, 19,933; Gilmer, 39,783; Pickens, 10,795, and White, 37,714.

In using the words "improved" and "wild lands," improved is meant to cover lands prepared for habitation or cultivation, and wild lands to denote lands wholly uncultivated and abandoned, or uncleared.

WM. A. WRIGHT.

Sworn to and subscribed before me, this 24th day of November, 1905.

LOGAN BLECKLEY,
Deputy Clerk, Supreme Court of Georgia.

AFFIDAVIT OF W. S. YEATES, GEOLOGIST.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
County of Fulton.

Personally appeared W. S. Yeates, who, being duly sworn herein, on oath says:

Affiant is a geologist by profession and has been for the past twenty-four years, and is now and since May 15, 1893, has been State Geologist for the State of Georgia.

Affiant was a member of both commissions appointed by the State of Georgia to investigate the conditions arising from the copper and sulphur smoke and fumes generated by the Ducktown and Tennessee Copper Companies, to wit: the commissions of 1903 and 1905.

Affiant, both in 1903 and 1905, made a careful and thorough investigation of the territory of the State of Georgia in near proximity to the Ducktown copper works.

In the examination of 1903 it was disclosed that the copper

and sulphur smoke and gases were doing great injury to the vegetation, fruit, and timber in the State of Georgia within a radius of a number of miles from the point on the Georgia line nearest to Ducktown, Tennessee.

The investigation of 1905 disclosed that the Tennessee Copper Company from whose works the major portion of the damage arises, abandoned its old works and site and erected its smelters and installed its furnace process several miles nearer—in fact, only a short distance from the Georgia line—had changed its process from open-heap roasting to reducing by furnace, which new process concentrated all smoke and gases within the narrow area of a chimney and gave them forth in a many-time stronger form than same were generated through the former method of roast-heaps.

In the immediate vicinity of the works the soil was not only wholly denuded of timber and vegetation, but by reason of the lack of such vegetation the rains had washed away the soil capable of producing vegetables, crops, or timber, leaving only decomposed rocks, incapable of sustaining vegetable life. Such a condition is the inevitable result of the continued destruction of all vegetable life, which in turn prevents retention by the earth of the moisture precipitated in such locality, occasioning, as a rule, the failure of springs and streams dependent thereon for their water supply.

Another result of this condition is the great injury to the highways within such territory. This is particularly true of a country of the character such as that around Ducktown, where it is largely of sloping character and sharp declivity. The heavy rains frequent in such mountainous countries run off as rapidly as precipitated upon the soil, and the fact that there is no vegetation to restrain or take up the moisture results in much washings of the hillsides, and the flooding of gulle s, creeks and branches, which in turn is practically injurious to the roads, they being neither corduroy nor macadam.

The chimney connected with said furnace was of sufficient height to ultimately slightly lessen the injury to the imme-

diate locality—that is, within a few hundred yards of the works—but beyond this limited area the power to injury by said fumes was made many times greater.

Under the present process the territory subject to the hurtful effects of said fumes is much larger than that within the influence of the old process. It is difficult to say how many miles within the State of Georgia the fumes may have effect, but it is beyond peradventure true that the territory has greatly increased since the furnace process was installed by the Tennessee Copper Company.

The Tennessee Copper Company has three furnaces in operation and four in course of erection, which, when completed, will more than double the capacity of the works and also the injuries being occasioned thereby. The operation of the new furnaces will greatly increase the territory subject to the ruinous effects of said fumes and double the damages hereinbefore specified, both as being done and threatened, which damage, by reason of the greater strength and volume of the fumes, will be accomplished much more speedily than could now be accomplished.

W. S. YEATES.

Sworn to and subscribed before me, this —— day of November, 1905.

W. H. HARRISON,
Notary Public Fulton County, Georgia.

IN THE SUPREME COURT OF THE UNITED STATES,

OCTOBER TERM. 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

GEORGIA—Gilmer County.

Personally appeared the undersigned who being duly sworn in the above stated case, each deposes and says as follows:

He has been a resident of said County and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property owner in said county, and each is engaged in the business set opposite his name.

Each of deponents is familiar with the location of defendants' furnaces. Each of deponents has by reason of his residence and the particular occupation in which he is now engaged become familiar with the physical situation and characteristics of the larger part of said county. He is acquainted with the soil, and the character thereof; the streams, the timber, the various species of trees which prevail in said forests; the general values of the land for agricultural and other purposes, and the general values of the trees for lumber and timber purposes.

The timber interests in said county are exceedingly large and

valuable. The timber, either standing or cut, posses a ready market. Many fine species of trees are to be found, such as the white pine, hickory, white oak, chestnut, poplar, and a large number of other varieties.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a grey haze or vapor It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive It is different from anything which deponents have ever experienced.

The color, the haze, the effect upon the eyes, the chaarcter of the odor, its peculiar unpleasant effect, all serve to physically identify beyond question the vapor or fumes which are discharged from the furnaces of the defendants.

There is not in any section of Gilmer County to the knowledge of any of deponents any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendonts' mines. This vapor is denser in character and has a tendency to settle towards the earth whenever the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or two and a half years been a matter of repeated occurrence during each month. This vapor has been generally noticed by the citizens and residents and has caused extensive comment.

Prior to said period of time the timber in the district in whch deponent lives was healthy, sound, in good condition, and there was no appearance of any cause generally affecting injuriously either the timber as a whole, or operating upon any particular species. Trees would occasionally here and there die from old age and random fires, lightning or other individual causes. These were, however, normal occurrences, and the great

body and bulk of the timber was in a normal, healthful, thriving condition.

Within the period of time mentioned and since the fumes and vapors emitted by the defendants' furnaces have been noticed in the district in which each deponent resides the general condition of the forests have changed—the timber is dying rapidly. It is no longer in a healthful condition. Much of it is dead. The percentage of dead trees to live trees has passed from a natural, normal per cent to one which is entirely unnatural and abnormal. Some of the species have become practically extinct, such as the chestnut-oak, and hickory. It is a fact that in the district in which each deponent lives these two varieties of trees have been to a large extent exterminated. These trees wither, cast the leaves in the summer long prior to the fall and die almost immediately. At the present rate of mortality of these two species it is a question of but a short time until they are absolutely exterminated in deponent's respective districts. In some of the districts of said county these trees have already become extinct.

Many other varieties of trees are showing similar effects and are dying in substantially the same way though requiring a greater length of time. Among these may be found the white pine, hemlock, white-oak, the post-oak and other varieties. Enormous quantities of these varieties are now in process of dying, the leaves wither and fall prior to the natural order of things. The leaves upon the white-pine turn yellow. The trees disclose to the eye at a glance that they are in process of death. Trees showing these outward signs in the late summer often do not put out the following spring. The trees thus affected will not put out at the top. This, the most exposed part of the tree is more quickly and rapidly affected than the under part which is to a greater or less extent protected by the surrounding trees and undergrowth. The trees die from the top toward the bottom.

Deponents do not know of any other course from which the results indicated could spring than that of the haze or mist above mentioned. There is no other haze, mist, vapor or fumes in said county from any other cause. There has been during said

period of time no peculiar or unusual climatic changes. There has been nothing unusual in any other physical or natural condition of affairs. There has been neither unusual drouth, nor excessive rainfall.

Each of deponents has been ordinarily familiar with the usual insects and bugs which have been found for many years in his respective district. He has not within the past two or three years noticed or observed anything unusual either in number of variety of this form of natural life.

H. M. Ellington, resident 30 years, district 11, section 2, Editor.
P. H. Milton, resident 61 years, district 11 section 2, Gardener.
W. H. Foster, resident 50 years, district 11, section 2, Farmer.
L. M. Simmons, resident 53 years, district 6, section 2, Farmer.
E. Buffington, resident 23 years, district 11, section 2, P. M.
J. J. Withrow, resident 25 years, district 10, section 2, Farmer.
B. W. Hill, resident 27 years, district 10, section 2, Farmer.
J. T. Sharp, resident 35 years, district 10, section 2, Farmer.
L. H. Sharp, resident 54 years, district 10, section 2, Farmer.
C. W. Jones, resident 21 years, district 10, section 2, Farmer
J. B. Harper, resident 27 years, district 10, section 2, Farmer.
E. J. Long, resident 23 years, district 10, section 2, Farmer.
J. W. Withrow, resident 55 years, district 10, section 2, Farmer.
D. S. Sumner, resident 40 years, district 10, section 2, Farmer.
Wm. Gibson, resident 44 years, district 10, section 2, Farmer.
L. M. Withrow, resident 24 years, district 10, section 2, Farmer.
J. R. Spivey, resident 29 years, district 10, section 2, Farmer.
D. V. Miller, J. P., resident 42 years, district 10, section 2. Farmer.
C. A. Gates, resident 23 years, section 10, section 2, Farmer.
A. F. Gates, resident 18 years, district 10, section 2, Farmer.
Jos. H. Randle, resident 22 years, district 10 section 2, Farmer.
G. W. Randle, resident 45 years, district 10, section 2, Farmer.
W. T. Pritchett, resident 38 years, district 11, section 2, Farmer.
L. L. Hill, resident 30 years, district 10, section 2, Farmer.
W. M. Hill, resident 25 years, section 10, district 2, Farmer.
J. B. Hill, resident 20 years, district 10, section 2, Farmer.
J. M. Hill, resident 23 years, district 10, section 2, Farmer.

L. L. Newberry, resident 20 years, district 10, section 2, Farmer.
L. E. Parks, resident 15 years, district 10, section 2, Farmer.
W. M. Parks, resident 45 years, district 10, section 2, Farmer.
J. R. Cole, resident 27 years, district 10, section 2, Farmer.
R. P. Parks, resident 45 years, district 10, section 2, Farmer.
J. W. Parks, resident 23 years, section 10, district 2, Farmer.
G. W. Wells, resident 35 years, district 26, section 2, Farmer.
J. P. Parks, resident 24 years, district 26, section 2, Farmer.
J. R. Fore, resident 29 years, district 26, section 2, Logger.
W. W. Wells, resident 17 years, district 26, section 2, Logger.
W. P. Wells, resident 35 years, district 26, section 2, Logger.
J. R. Wells, resident 30 years, district 26, section 2, Farmer.
W. W. Wells, resident 28 years, district 26, section 2, Farmer.
R. F. Simmons, resident 45 years, district 12, section 2, Farmer.
G. G. Wright, resident 35 years, district 12, section 2, Farmer.
J. R. Nicholson, resident 35 years, district 12, section 2, Farmer.
A. J. Williams, resident 20 years, district 5, section 2, Farmer.
J. B. Grizzel, resident 35 years, district 12, section 2, Farmer.
J. W. Clontz, resident 51 years, district 12, section 2, Farmer.
R. L. Henderson, resident 39 years, district 12, section 2, Farmer.
J. Evans, resident 21 years, district 5, section 2, Farmer.
W. M. Findly, Jr., resident 28 years, district 12, section 2, Farmer.
J. H. Nicholson, resident 25 years, district 12, section 2, Farmer.
J. W. Brown, resident 26 years, district 6, section 2, Farmer.
W. L. Henson, resident 19 years, district 11, section 2, Farmer.
J. W. Dunn, resident 40 years, district 11, section 2, Farmer.
Wm. Ellington, resident 60 years, district 11, section 2, Farmer.
J. H. Johnson, resident 34 years, district 11, section 2, Farmer.
V. U. Johnson, resident 33 years, district 11, section 2, Farmer.
W. P. Woody, resident 30 years, district 6, section 2, Farmer.
I. N. Walker, resident 68 years, district 6, section 2, Farmer.
D. W. Brookshire, resident 20 years, district 11, section 2, Farmer.
G. A. Newberry, resident 35 years, district 6, section 2, Farmer.
W. M. Davis, resident 38 years, district 6, section 2, Farmer.
S. P. Holt, resident 45 years, district 6, section 2, Farmer.
Jesse Holden, resident 65 years, district 6, section 2, Farmer.

J. C. Pettit, resident 64 years, district 6, section 2, Farmer.
H. Smith, resident 20 years, district 6, section 2, Farmer.
J. P. Chastain, resident 69 years, district 11, section 2, Farmer.
B. F. Ellington, resident 63 years, district 11, section 2, Farmer.
H. F. Weaver, resident 32 years, district 6, section 2, Farmer.
J. S. Long, resident 24 years, district 7, section 2, Farmer.
B. F. Mulkey, resident 20 years, district 6, section 2, Farmer.
H. I. Weaver, resident 18 years, district 6, section 2, Farmer.
C. W. Strickland, resident 19 years, district 11, section 2, Farmer.
J. H. Dunn, resident 18 years, district 11, section 2, Farmer.
Jno. Clontz, resident 11 years, district 11, section 2, Farmer.
W. A. Walker, resident 46 years, district 11, section 2, Farmer.
W. R. Weaver, resident 35 years, district 11, section 2, Farmer.
J. W. Colbert, resident 19 years, district 11, section 2, Farmer.
R. F. Harris, resident 20 years, district 11, section 2, Farmer.
B. H. Holt, resident 36 years, district 11, section 2, Farmer.
R. L. Rodgers, resident 40 years, district 11, section 2, Farmer.
J. W. Henson, resident 40 years, district 11, section 2, Farmer.
H. B. Pritchett, resident 27 years, district 11, section 2, Farmer.
W. M. Hampton, resident 3 years, district 11, section 2, Farmer.
J. S. Rogers, resident 33 years, district 11, section 2, Farmer.
J. E. P. Smith, resident 50 years, district 11, section 2, Farmer.
A. A. Sutten, resident 30 years, district 12, section 2, Farmer.
F. V. Teem, resident 50 years, district 12, section 2, Farmer.
J. F. Williams, resident 49 years, district 5, section 2, Farmer.
J. S. Wright, resident 42 years, district 11, section 2, Farmer.
E. A. Sutton, resident 45 years, district 12, section 2, Farmer.
J. C. H. Teem, resident 55 years, district 12, section 2, Farmer.
W. C. Tatum, resident 44 years, district 12, section 2, Farmer.
W. T. Nicholson, resident 64 years, district 12, section 2, Farmer.
W. R. Wright, resident 50 years, district 11, section 2, Farmer.
J. P. Evans, resident 49 years, district 11, section 2, Farmer.
J. H. Nicholson, resident 25 years, district 12, section 2, Farmer.
P. G. Hyatt, resident 58 years, district 25, section 2, Surveyor.
Geo. W. Patterson, resident 6 years, district 11, section 2, Machinist.

W. L. Plumley, resident 33 years, district 11, section 2, Lumberman.

C. W. Randle, resident 25 years, district 11, section 2, Lumberman.

D. R. Webb, resident 25 years, district 11, section 2, Lumberman.

Wm. Elliott, resident 57 years, district 11, section 2, Lumberman.

Subscribed and sworn to before me this January 29, 30 and 31; February 8, 9, and 10, 1906.

A. H. BURTZ, Notary Public, Glimer County, Ga.

No. 15, Original.

IN THE SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,

County of Gilmer,

Personally appeared the undersigned, who being sworn in the above stated case, each deposes and says as follows: he lives in the above stated County and in the District and Section set opposite his name. He has resided in said County for the number of years, which is likewise set opposite his name. Each of deponents is a property owner in said County and each is engaged in the business set opposite his name.

Each of deponents is familiar with the location of defendants' furnaces and has frequently observed the sulphur fumes or vapor emitted from said furnaces. These fumes are of a somewhat whitish or grayish color, sometimes resembling a haze or mist. These fumes or mist have an exceedingly unpleasant odor, which is marked both in extent and character. On days when the atmosphere is heavy and the wind is blowing in the direction from the premises of defendants, these fumes appear to have considerable cohesive qualities and float through the air great distances. Frequently these fumes after drifting through

the air having the general appearance of a cloud, will settle toward the earth coming in contact with the trees and smaller vegetation.

Further, when the wind has been blowing from the direction of the defendant's premises and the atmosphere has been misty or cloudy, so that it was impossible to see the fumes, each of deponents has frequently known of the presence of sulphur fumes in the air from the strong and disagreeable odor.

To the knowledge of each of deponents, there is not in any section of Union County any mercantile or manufacturing enterprise or natural condition of affairs, which ever has, does or could produce either such haze, vapor or odor. The settling of this mist or vapor is not a thing, which occasionally occurs during the year. It has within the past two or two and a half years been a matter of repeated occurrence during each month. This vapor has been generally noticed by the citizens and residents of said County and has caused extensive comment.

Each of deponents has by reason of his residence and of the particular occupation in which he is now engaged become familiar with the physical situation and characteristics of the larger part of said County. He is acquainted with the soil, and the character thereof; the streams, the timber, the various species of trees, which prevail in said forests; the general value of the land for agricultural and other purposes, and the general market value of the trees.

The timber consisting of white pine, hickory, white oak, chestnut, poplar, and a large number of other varieties is one of the natural resources of the County, and either standing or cut possesses a ready market.

That a few years ago the timber in the Western part of Union County was in a healthy and vigorous condition, containing only the ordinary and natural per cent of dead timber, such as trees which had died from old age, from being girdled, burned or struck with lightning. Since the fumes have been emitted by the defendant companies a marked difference has occurred in the character of said timber. The per cent of dead timber has greatly increased.

There has been no unnatural change in physical conditions; no marked or noticeable climatic occurrences have taken place; the weather has neither been unnaturally hot nor unnaturally cold; and there has been no unnatural drought or excessive rainfall during the time indicated.

A large per cent of certain kinds of trees, particularly hickary, chestnut oak, white pine and white oak in the Western part of said County discloses to the eye at a glance, that it is not vigorous and is dying. The leaves wither and fall prior to the natural order of things, the leaves of the white pine turn yellow, and the top, the most exposed part of the tree is more readily and quickly affected than the under part, which is to a greater or less extent protected by the surrounding trees and undergrowth. The trees die from the top toward the bottom.

Deponents do not know of any other source from which the results indicated could spring, than that of the fumes or vapor above mentioned.

Each of deponents has been ordinarily familiar with the usual insects and bugs, which have been found for many years in his respective district, and he has not within the past two or three years noticed or observed anything unusual either in number or variety of this form of natural life.

H. H. Erwin, resident 41 years, district 9, section 1, Farmer.
A. M. Calwell, resident 33 years, district 10, section 1, Farmer.
Ed Butt, resident 24 years, district 9, section 1, Farmer.
C. L. Butt, resident 26 years, district 9, section 1, School Teaching.
S. V. Bennett, resident 28 years, district 9, section 1, Farmer.
W. L. Rogers, resident 33 years ,district 9, section 1, Farming.
J. G. Fields, resident 65 years, district 9, section 1, Farming.
W. M. O. Nelson, resident 25 years, district 17, section 1, Farming.
L. T. Christopher, resident 56 years, district 16, section 1, Merchant.
B. F. Hood, resident 45 years, district 16, section 1, Farming.
J. A. Reid, resident 37 years, district 9, section 1, Farming.
John Satterfield, resident 44 years, district 9, section 1, Farming.

P. V. Watkins, resident 35 years, district 9, section 1, Farming.
W. B. Brackett, resident 34 years, district 9, section 1, Farming.
Moses B. Weaver, resident 43 years, district 10, section 1, Farming.
L. A. Ross, resident 43 years, district 10, section 1, Farming.
W. M. Logan, resident 26 years, district 9, section 1, Farming.
G. A. Pruitt, resident 23 years, district 10, section 1, Farming.
A. L. Ingram, resident 38 years, district 10, section 1, Farming.
James W. Poms, resident 4 years, district 10, section 1, Farming.
John R. Gray, resident 14 years, district 10, section 1, Farming.
S. G. Harkins, resident 62 years, district 10, section 1, Farming.
E. G. Harkins, resident 32 years, district 10, section 1, Farming.
John Clements, resident 46 years, district 10, section 1, Farming.
John W. Jones, resident 61 years, district 10, section 1, Farming.
T. H. Jones, resident 22 years, district 10, section 1, Farming.
J. A. Jones, resident 18 years, district 10, section 1, Farming.
N. C. Forrester, resident 15 years, district 10, section 1, Farming.
N. B. Lang, resident 20 years, district 10, section 1, Farming.
James A. Butt, Jr., resident 33 years, district 10, section 1, Merchant.
W. G. Payne, resident 40 years, district 10, section 1, Farming.
W. A. McDons, resident 40 years, district 7, section 1, Farming.
J. B. McDons, resident 40 years, district 7, section 1, Farming.
S. A. Major, resident 45 years, district 10, section 1, Farming.
J. F. Rickets, resident 15 years, district 7, section 1, Farming.
J. T. Holland, resident 6 years, district 7, section 1, Farming.
John S. Watts, resident 42 years, district 10, section 1, Farming.
G. W. Roberson, resident 1 year, district 7, section 1, Farming.
E. E. Roberson, resident 1 year, district 7, section 1, Farming.
W. T. Telhero, resident 11 years, district 7, section 1, Farming.
W. B. Holbrook, resident 1 year, district 10, section 1, Farming.
J. Wash Parks, resident 50 years, district 7, section 1, Farming.
W. H. Taylor, resident 35 years, district 8, section 1, Farming.
A. J. Rector, resident 24 years, district 8, section 1, Farming.
J. A. Nichols, resident 32 years, district 8, section 1, Farming.
W. R. Shope, resident 20 years, district 7, section 1, Farming.
Allen Lancaster, resident 30 years, district 7, section 1, Farming.
D. J. Payne, resident 4 years, district 10, section 1, Farming.

R. H. Simonds, resident 10 years, district 7, section 1, Farming.
W. R. Seabolt, resident 27 years, district 10, section 1, Farming.
J. W. Parham, resident 40 years, district 10, section 1, Farming.
W. L. Parham, resident 40 years, district 10, section 1, Farming.
J. B. Ammons, resident 13 years, district 10, section 1, Farming.
A. V. Ledford, resident 31 years, district 10, section 1, Farming.
F. B. Ledford, resident 22 years, district 10 section 1, Farming.
H. L. Calwell, resident 48 years, district 9, section 1, Farming.
J. C. Bolring, resident 65 years, district 17, section 1, Farming.
A. C. Hemphill, resident 9 years, district 9, section 1, Merchant.
N. W. Gilbert, resident 50 years, district 9, section 1, Farming.
A. M. West, resident 53 years, district 9, section 1, Farming.
A. J. Saftis, resident 51 years, district 9, section 1, Farming.
Joe O. Loftis, resident 45 years, district 9, section 1, Farming.
L. N. Allen, resident 21 years, district 9, section 1, Farming.
N. B. Hill, resident 41 years, district 9, section 1, Farming.
J. G. Erwin, resident 40 years, district 9, section 1, Merchant and Farming.
J. B. Edge, resident 7 years, district 9, section 1, Merchant.
L. B. Chastain, resident 7 years, district 9, section 1, Farming.
M. L. Henson, resident 32 years, district 9, section 1, Merchant.
D. A. Byers, resident 18 years, district 8, section 1, Farming.
G. B. Warren, resident 30 years, district 8, section 1, Farming.
Wm. Davenport, resident 47 years, district 8, section 1, Farming.
W. J. Ledford, resident 19 years, district 8, section 1, Farming.
J. M. Poteete, resident 38 years, district 8, section 1, Farming.
J. W. Rogers, resident 35 years, district 8, section 1, Farming.
M. V. Lance, resident 43 years, district 8, section 1, Farming.
T. F. Hamson, resident 35 years, district 8, section 1, Farming.
R. L. Byrd, resident 4 years, district 8, section 1, Farming.
J. D. Lance, resident 44 years, district 8, section 1, Farming.
E. Cearley, resident 50 years, district 8, section 1, Farming.
Charles Cearley, resident 50 years, district 8, section 1, Farming.
F. L. Byers, resident 26 years, district 8, section 1, Farming.
John Cook, resident 19 years, district 8, section 1, Farming.
James Nichols, resident 25 years, district 8, section 1, Farming.
W. V. Poteete, resident 40 years, district 8, section 1, Farming.
C. E. Hendrix, resident 10 years, district 8, section 1, Farming.

Juan Chambers, resident 23 years, district 9, section 1, Farming.
A. L. England, resident 45 years, district 9, section 1, Farming.
D. L. Brackett, resident 37 years, district 9, section 1, Farming.
J. D. Penland, resident 42 years, district 9, section 1, Farming.
Pinkney Boyd, resident 60 years, distret 9, section 1, Farming.
W. T. Sullivan, resident 55 years, district 9, section 1, Farmer.
W. E. Sullivan, resident 27 years, district 9, section 1, Farmer.
J. L. Chambers, resident 20 years, district 9, section 1, Farming.
J. W. Chambers, resident 22 years, district 9, section 1, Farming.
R. L. Nicholson, resident 36 years, district 9, section 1, Farmer.
L. A. Rich, resident 32 years, district 9, section 1, Farmer.
W. R. Rich, resident 26 years, district 9, section 1, Farming.
B. M. Petty, resident 23 years, district 9, section 1, Farming.
F. J. Erwin, M. D., resident 48 years, district 9, section 1, Druggist.
T. D. Rogers, resident 60 years, district 9, section 1, Farming.
T. C. Hughes, resident 61 years, district 9, section 1, Minister.
E. W. Butt, resident 62 years, district 9, section 1, Merchant.
V. I. Butt, resident 27 years, district 9, section 1, Editor.
W. E. Candler, resident 50 years, district 9, section 1, Attorney.
J. A. Gilreath, resident 44 years, district 10, section 1, Farmer.
S. Y. Jarrett, resident 56 years, district 9, section 1, Ordinary.
E. G. Wellburn, resident 49 years, district 9, section 1, Farming.
Pat Haralson, resident 32 years, district 9, section 1, Attorney.
S. A. Pless, resident 50 years, district 9, section 1, Sheriff Union Co. Ga.

Sworn to and subscribed before me, this the 29th day of March 1906.

JAMES L. HARALSON,
Clerk Superior Court, Union Co., Ga.

James L. Haralson, resident 36 years, district 9, section 1, Clerk Superior Court.
C. J. Wellborn, Jr., resident 38 years, district 9, section 1, Atty-at-Law.

Blairsville, Ga.

Sworn to and subscribed before me by C. J. Wellborn, Jr., and James L. Haralson, this 29th day of March, 1906.

W. E. CANDLER, N. P., Union Co., Ga.

IN THE SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM. 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,

County of Union.

Personally appeared before the undersigned, Notary Public, Will H. Shippen, who first being duly sworn in the above styled and numbered cause deposes and says:

That he is forty-one years of age, a timber-land owner and lumberman by profession, and has been a resident and identified with Gilmer County, Georgia for the past eight years.

Is at present President and General Manager of Shippen Bros., Lumber Company, of Ellijay, Georgia, a Georgia corporation, which has control of and owns upwards of 100,000 acres of timber in Gilmer, Fannin, Murray, Union and Towns Counties, Georgia, all more or less located within the distances directly affected by the fumes from the copper reducing plants located just across the Georgia line in Polk County Tennessee.

Deponent has had eighteen years of practical active experience in the lumber business, and in the forests of this State, Pennsylvania and Kentucky, and is by reason of such experience

thoroughly familiar with the commercial timber found in the forests of these States; their growth, appearance, commercial value, their care and management, and the causes generally that lead to their destruction and decay.

Deponent was a member of the Commission of 1905 appointed by the General Assembly of the Georgia Legislature to investigate the damage to timber and vegetation in North Georgia caused by the gases and fumes from the Copper Companies' plants above referred to. This deponent did visit a part of the stricken district in company with said Commission in August 1905 and helped to prepare and draft the report of said Commission and know of my personal knowledge, after a more thorough and searching investigation since that the same was in no wise overdrawn.

This deponent on account of the vital interest of the Shippen Brothers Lumber Company in this matter, and as a citizen of Gilmer County, Georgia, has during the past two years made the subject of the destruction of the forests and vegetation of North Georgia an especial study, and has devoted much time to tracing the effects of the fumes on the timber, fruit, crops and vegetation of this territory, and is in consequence of this fact and his vocation well acquainted with Fannin, Gilmer, Murray, Union and Towns Counties, Georgia, the lay of the land, the soil, crops, fruit, farming, the timber in the forest and the condition of same, the value of the timber for lumbering and other purposes. This deponent has made careful and exhaustive examination of the affected timber to determine absolutely the true cause of the injury. Many of these examinations hereabouts were made in company with Professor B. E. Fernow, or Forester J. F. Holmes of the United States Department of Forestry, as well as with the Investigating Commission above referred to, and in nearly every case the cause of injury and death was directly traced to the furnace fumes. This deponent by reason of his experience in the forests is thoroughly familiar with the appearance and signs that are always left by fire in timber; also lightning where marks are always plain; also the ravages of insects and fungi. From these close examinations of the affected timber and its appearance and my knowledge and experience in forestry,

I am certain that this wholesale destruction in North Georgia is being wrought almost entirely by the sulphur dioxid generated, developed and liberated in its concentrated form by the defendants' furnaces and smelters in Polk County, Tennessee.

The first time deponent's attention was called to the damage being done to fruit in this County by these fumes was some two years oga in deponent's orchard at Ellijay, when ex-representative, Thos. Johnson of Fannin County called my attention to the many faulty and decaying peaches and shrivelled apples in the orchard. We noted the peaches showed all the defects on the top side and on that exposed toward the defendant's plant, and this despite the fact that the orchard had been well sprayed and cared for. This deponent at this time, knowing little of the effects of these fumes on fruit, questioned Mr. Johnson's contentions, but he was steadfast in his claim, and stated that he had been raised in Fannin County near the harmful zone of the old roast heaps and had traced and knew the effects that they had on fruit there. That he had observed this harmful zone spread further and further and embrace new territory every year, and that it had now reached Ellijay. Since this time this deponent has often observed this same effect on the fruit in this County, and is now thoroughly convinced of the correctness of Mr. Johnson's contention.

When deponent first came in contact with the forest and timber in said counties some eight years ago, they were as healthy and thrifty as could be found anywhere, while at present in many parts of the said counties conditions are the very reverse, the timber is unhealthy, and shows at once to an experienced eye that it is suffering from some very severe blight. On cutting into the timber thus affected the new wood, or late annual growth will be found to be very small and in many cases showing no growth at all, and a tree thus affected will shortly die.

Deponent has visited the mines, works and smelters of the defendant companies and much of the country surrounding their operations in Tennessee, and has in consequence come into immediate contact with the gases and fumes liberated there and is thoroughly familiar with the appearance and odor of these sulphurous gases and fumes. Whenever one gets thoroughly

acquainted with the odor of these gases there is no possible chance of ever getting them confused with any other odor or gas in all this country. I have often seen and smelled this gas very strong in the air throughout almost all parts of Fannin and Gilmer Counties and in many parts of Murray and Union counties, and this always when the wind was from the direction of the defendants' plants, and never when the air was from any other quarter. This odor being more perceptible when the air is damp and heavy. I had never noticed the presence of these fumes in the country much before the last two or three years, and there was not much timber or vegetation killed in the forest except from the usual natural causes, but since this gas has made its appearance here great quantities of timber has died. Last summer, particularly was this noticeable. This gas was present time after time, and this was attendant with vastly increased destruction of timber.

Around the immediate vicinity of the plants of the defendants the land is practically bare of veetation of every description for a radius of two or three miles, and as one journeys away from same he notices some few varieties of hardy resisting grasses; further one finds a few stragling trees with the tops and outer limbs dead and curled. These usually are the heavy sap varieties. As he gets further away he notices the grasses and timber showing less and less the evil effects of the poisonous gases. If a barrier or mountain comes between the timber, on the side next to the mines, vegetation will show almost complete destruction. This too, usually on the north slopes where the soil is richest, and where the most thrifty and best timber is always found, when ordinary and healthy conditions prevail. While on the protected side, though it be the south, where the land is usually thin and timber small and scrubby, the trees will show little damage. About Ellijay, for instance and in Gilmer County, twenty to thirty miles from the furnaces, the hickory has almost all been killed and it is practically a thing of the past in the county, while chestnut oak, chestnut, white pine, hemlock and many of the oaks are fast following hickory. The further away from the mines one gets the less and less the damage shows, now confining itself to a few species in the forest—always the

thin sap varieties that have their growth high up on the mountain in places exposed to the fumes as they are wafted against them. Any sensible person going to defendants' mines and works, knowing anything of forests and timber generally, seeing conditions there, then journeying away toward and through the stricken districts of this State could, and would, know and see the cause.

This destruction is fast spreading and reaching further and further into the territory of this State, and if the amount of sulphur as now smelted is trebled by the blowing in of four new furnaces the Tennessee Copper Company have blown in lately and are to blow in, the damage will be multiplied in the same ratio.

Even if the present fumes be not increased and they accomplish as much destruction of timber in the near future as they have in the recent past, it will only be a short time until the forests of North Georgia are as bleak and barren as the hills surrounding the defendants' plants in Tennessee. No where has this deponent witnessed such absolute destruction of all vegetation as exists on every hand near the operations of these copper companies. If all these fumes are to be concentrated in a single stack 325 feet high, and three times the green ore treated as heretofore, it is only a matter of a short time until the forests and vegetation in these counties is practically ruined and destroyed.

Our company at present has six large sawmills at work cutting our timbers in these counties, and at our present rate of cutting with our large holdings and if healthy conditions prevailed, we would have practically an inexhaustible supply of timber, as we are practicing forestry, cutting out only the mature timbers and letting the younger trees grow. Thus our timber would reproduce itself faster than we could cut it.

The sulphur dioxid generated by these companies spoils this entirely, as it kills everything on the ground, young and mature, and is at present destroying yearly many times as much timber as we are cutting in our business, and in many places making practically a clean sweep of everything on the land.

This reponent has read the affidavit of Mr. J. Park Channing, Mr. Rondolph Adams, O. H. Glasser and others regarding the location of the Tennessee Copper Company's smelter never having been moved from where now located. Also the affidavit of Mr. T. G. Hudson, Dr. W. S. McCandless and Prof. W. S. Yates, all of whom were members of the same Investigating Committee with this deponent, and doubtless got their information on the subject while members of the said Commission in company with this deponent on our investigation. While it may be true no smelter may have been moved or erected nearer the territory of this state, the fact remains that the main production of the sulphur dioxid was moved much nearer this territory.

Under the old process the green ore was burned or roasted on open heaps some miles from the territory of this State and this sulphur dioxid largely liberated then and there and the smelters were used to treat material that had most of the sulphur burned out of it. Under the new process the green ore with all of the sulphur in it was brought to the smelters much nearer the territory of this State and smelted there. Using the words of the President of the Tennessee Copper Company, Mr. J. Park Channing, who, in speaking of this new process says:

"Much to our gratification we have found the gases from the furnaces are so rich in S- O- 2 that we can make acid from them by the Chamber process. This will give us a by-product which will be of great value in the south for the purpose of making fertilizer."

This S- O- 2 is none other than deadly sulphur dioxid, the agent of the wholesale destruction in North Georgia, and is made doubly more deadly to vegetation by being condensed and made "so rich," as Mr. Channing puts it, by concentration in the one stack and sent high into the air by the furnace heat to be drifted over Georgia territory.

This sulphur dioxid coming in contact with moisture is changed into sulphuric acid gas, or sulhpur trioxid, which being 2.21 times heavier than the atmospheric air of the same temperature, falls to the earth of its own weight, and proves the fallacy of the defendants' theory that a tall stack will do away with the damage to vegetation the present operation is attendant with.

Deponent further notes affidavit of Mr. J. Park Channing, wherein he states he determined to build the 325-foot stack at his plant to disseminate the gases before they come back to earth and thus relieve the damage. In an article on the same subject in a book on Pyrite Smelting he says in this connection:

"We are, however, providing the new plant with a stack 325 feet high (internal diameter 20 feet) so as to give us perfect draft, which is desirable in Pyrite Smelting, as without proper draft, and with gases leaking from doors the feed floor is by no means a comfortable place."

Employees and foremen in charge at the Tennessee Copper Company's plant told deponent that this stack was to be built to furnish proper and sufficient draft for the new furnaces then building and the ones then in use, as the 120-foot stack was not sufficient for furnaces then in use. Mr. Channing says this also in his affidavit, to-wit:

"The 120-foot stack now in use is of such small diameter that it is incapable of carrying off all the gases generated."

Deponent further notes wherein the said Mr. J. Park Channing says the State of Georgia was well aware that the Tennessee Copper Company and its predecessors in title had operated the copper industries in Polk County, Tenn., for many years and was in consequence well aware of conditions there.

This deponent knows that the damage and the principal destruction of the timber and farming interests of this State have been brought about and accomplished largely in the last two or three years and doubly so in Gilmer County during and since last summer.

Deponent further states that Mr. Channing is mistaken entirely when he deposed in said affidavit the belt of injury is confined almost entirely to the State of Tennessee, and almost entirely to the lands belonging to the Tennessee Copper Company and Ducktown Sulphur, Copper & Iron Company, but on the other hand deponent knows of thousands of acres of land belonging to Shippen Brothers Lumber Company, and other citizens and residents of the State of Georgia that have been and are daily being badly damaged, and the timber ruined by said fumes and gases.

Deponent further avers that Mr. Channing is further in error when he states nothing has as yet been demonstrated which proves that the furnace process is a greater nuisance than the roast heap process. Deponent knows that since the adoption of the new process by the Tennessee Copper Company in early summer last year, that the presence and strength of the sulphur fumes has been much more marked, and the destruction of timber and vegetation more than doubled throughout this territory.

This deponent has read the affidavit of Dr. C. A. Schank filed in this case, and know of my own personal knowledge that the Doctor is mistaken when he avers, in substance that the damage to timber in Georgia by the sulphur fumes is entirely confined to Fannin County and extending only eleven and a half miles from the State line, and am certain the Doctor could not have personally inspected this territory.

This deponent has noted damage in the southern part of Gilmer County, Georgia, twenty or thirty miles within the territory of Georgia, where, on certain original land lots, as much as eighty to ninety per cent of certain varieties of virgin timber had been killed by these fumes.

Dr. Schank is further in error when he avers, in substance, that all the streams that have their source in the territory affected, except one small creek, flows through Tennessee. The fact is, the region affected is drained by the following rivers, all of which have their source in the district affected and are distinctly Georgia rivers—the Jack, Connesauga, Oostanaula, Ellijay, Cartecay, Coosawatee, Nottla and Toccoa. All of these rivers are capable of doing great damage as in the case of one of the smallest of the lot—the Cartecay--when on a rampage this deponent has known it to sweep every bridge that crosses it from its source to its junction with Coosawatee and wound up by taking the railroad bridge at Ellijay out as well, twisting and tearing up and breaking the heavy railroad rails across said bridge, as if they were pipe-stems.

Dr. Schank is further in error when he avers that the damage within the territory under observation done to the trees of all species and of all sizes by forest fires is sylvaculturally and economically by far greater than the damage attributed to

sulphur fumes. This deponent is thoroughly familiar with the effects of forest fires on timber in this territory and other sections of the country. While it is no doubt a curse in many sections, it never kills great bodies of timber here, such as I have often seen in Pennsylvania, where I have even known fellow lumbermen to have lost their lives. It is very rare indeed here that any considerable damage is ever done to the timber by forest fires. This is no doubt on account of less under-brush and fuel on the ground. I have seen these fumes accomplish more devastation to timber in a few months last summer than I have observed caused by fire in my whole experience in this State.

This deponent further states that Dr. Schank is again in error when he avers that ninety-three per cent of this country to be deficient in saw timber, and that trees fit for the saw are so scattering that logging operations cannot be conducted at present range of prices. The Shippen Brothers Lumber Company have proven and are daily proving the incorrectness of this statement by their operations here in this very territory. Deponent knows where his company has cut the large mature saw timber from some lands in this territory, which operation after paying all cost of production of every description netted over $24.00 per acre, with much valuable timber, railroad ties and poles left on the land.

This deponent has read the affidavits of Drs. B. E. Fernow and C. A. Schank, and other experts filed in this case wherein they attempt to argue and prove that the destruction of timber and vegetation by sulphur fumes does not and will not affect the humidity of the air and streams that flow in this section.

They further agree that to accomplish this, this destruction of timber must be accomplished by fire, axe, or clearing, or some other method other than sulphur dioxid.

That forest cover does govern to a great extent the water supply of every county is well known and admitted by every forester of even limited experience the world over.

Doubly is this so in this case where the country affected is a great watershed, the backbone of a part of the great Appalachian range wherein the Georgia rivers above named have their source.

This deponent knows that timber and vegetation have been affected and killed over a very large section of this State embracing the affected country some four hundred and fifty square miles of territory, all more or less, affected. Near the furnaces in Georgia territory every thing on the land is killed—old and mature timber; second growth, bushes, and even the ferns and mosses, the damage decreasing usually as distance from furnaces increased so that on the outer edge of the affected zone the damage confines itself to a few as well as single species. With all this wholesale destruction of timber over this vast territory, no sensible forester with even the most limited experience will question but that this destruction of timber and vegetation has and will exert a very marked influence on the rivers of Georgia that have their source in the affected district.

This deponent has read the affidavit of M. J. Webb, filed in this case, and while this deponent has often been reminded of the animus of the said Webb, hardly thought that he would have gone so far as to have injected this into a matter of this kind, and taken the liberty with the name of the Shippen Bros., Lumber Co., that he has. His slurs and references in this matter are wholly without foundation or fact. This deponent states that the said Webb is further mistaken when he avers that the soil throughout the counties of Gilmer, Murray and Fannin is thin and poor and that there is no profitable farming, and none can be carried on except in the most isolated cases. This deponent knows that there is rich, fertile, black, loamy and productive lands here, and very often on the very tops of some of our highest mountains, as can be found anywhere. Deponent has just picked up an Irish potato from a barrel of same in our Company's store here that was grown on a mountain near here in this same black soil that weighed one pound and ten ounces. This potato came from near the same land on which C. H Arnold, deposes by affidavit in this case, that he has raised at the rate of 636 bushels of potatoes to the acre in this county. Out of another barrel in our store has just selected a sweet potato grown near Ellijay that weighed over two and a half pounds, and has repeatedly seen apples grown in this mountain land that weighed over sixteen ounces, and has himself raised turnips that

weighed eight pounds, and pears that weighed sixteen and a half ounces, and peaches that measured over thirteen inches in circumference, that were all as perfect as could be, all grown on this deponent's farm in Ellijay. Much of the territory hereabouts is excellent fruit land and has until recently attracted many men from other counties in the State, who are planting out extensive commercial fruit orchards in this county.

This deponent further avers that M. J. Webb is again entirely mistaken when he says that there is no injury in either Gilmer or Murray County, either to crops, timber or roads. Deponent knows of his own knowledge of great damage in both counties from the Ducktown fumes. This deponent knows that the sulphur fumes in this county, Fannin, and part of Murray and Towns has almost completed the Bee industry, and where a few years ago thousands of pounds of the very best honey was made, there is scarcely any to be found, and the bees are almost entirely annihilated.

As a member of the Commission appointed by the Georgia Legislature, this deponent has been repeatedly appealed to, approached and solicited by the farmers, timber owners, and others of the affected districts, asking and imploring that I do everything in my power for their relief, they relating instance after instance of the damage to their property by these fumes.

This deponent knows from the present scope of territory now affected in this State, and which is increasing at an alarming rate, that the present value of the property now involved transcends four-fold in value that of defendants' companies in this suit, besides the certain full developmet of the timber, if these fumes be suppressed, in the very near future, calling for the establishment of immense wood-working plants seeking cheap material and employing thousands of men in the full exploiting of same, and developing the resources of this country, besides the farming and fruit raising interests of this country, all of which the fumes from these defendants' furnaces are destroying entirely.

That this destruction is wholly wanton, and can be successfully and properly handled by the installation of a sulphuric acid plant is proven by no less person than the President of one

of the defendants in this case, J. Park Channing, in an article by him on Pyrite Smelting wherein he says in speaking of the new process adopted by the Tennessee Copper Company:

"Much to our gratification we have found that the gases from the furnaces are so rich in S- O- 2 that we can make acid from them by the Chamber process. This will give us a by-product which will be of great value in the south for the purpose of making fertilizers, and not only will this operate toward the reducing the volume of gases given to the atmosphere, but will prove a source of considerable revenue."

This deponent is of the opinion that the 325-foot stack of the Tennessee Copper Company will in no wise relieve the situation, and on the contrary will only increase the destruction of timber in the territory of this State. Such a stack cannot possibly perform the miracle of suspending a gas in mid-air that has a specific gravity of 2.21. Deponent believes that the only hope for relief in this matter lies in the establishment of a sulphuric acid plant at these furnaces that will absorb these gases and prevent their free liberation in the air.

WILL H. SHIPPEN

Sworn to and subscribed before me this 13th day of April, 1906.

W. T. PICKETT, Notary Public, Gilmer County, Georgia.

IN THE SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM. 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,

County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above stated case, each deposes and says as follows:

He has been a resident of said County and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property owner in said county, and each is engaged in the business set opposite his name.

Each of deponents says that the land when cleared of the trees, and particularly the land which is irrigated by streams, in the particular occupation in which he is now engaged become familiar with the physical situation and characteristics of the larger part of said county. He is acquainted with the soil, and the character thereof; the streams, the timber, the various species of trees which prevail in said forests; the general values of the land for agricultural and other purposes, and the general values of the trees for lumber and timber purposes.

Each of deponents says that theland when cleared of the trees, and particularly the land that which is irrigated by streams, in his particular district are fertile, readily cultivated and produce in paying quantities corn, wheat and other crops. The soil is specially adapted for the raising of what is termed market truck, such as tomatoes, corn, cabbage, etc.

Much of said county is devoted to agricultural purposes. The farms as a rule have heretofore been profitable to the owners. They have been heretofore cultivated each year and were generally in good condition.

The timber interests in said state are exceedingly large and valuable. The timber, either standing or cut, possesses a ready market. Many fine species of trees are to be found, such as the white pine, hickory, white oak, chestnut, poplar, and a large number of other varieties.

Within the past two or three years the furnaces of defendants have been smelting enormous quantitis of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is preceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents have ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of Fannin County to the knowledge of any of deponents any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle toward the earth whenever the air is dense or heavy with moisture. The odor, color, and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or

two and a half years been a matter of repeated occurrence during each month. This vapor has been generally noticed by the citizens and residents and has caused extensive comment.

Prior to said period of time the timber in the district in which deponent lives was healthy, sound, in good condition, and there was no appearance of any cause generally affecting injuriously either the timber as a whole, or operating upon any particular species. Trees would occasionally here and there die from old age and random fires, lightning, or other individual causes. These were, however, normal occurrences, and the great body and bulk of the timber was in a normal, healthful, thriving condition.

Within the period of time mentioned and since the fumes and vapors emitted by the defendants' furnaces have been noticed in the district in which each deponent resides the general condition of the forests have changed—the timber is dying rapidly. It is no longer in a healthful condition. Much of it is dead. The percentage of dead trees to live trees has passed from a natural, normal per cent to one which is entirely unnatural and abnormal. Some of the species have become practically extinct, such as the chestnut, oak, and hickory. It is a fact that in the district in which each deponent lives these two varieties of trees have been to a large extent exterminated. These trees wither, cast their leaves in the summer long prior to the fall and die almost immediately. At the present rate of mortality of these two species it is a question of but a short time until they are absolutely exterminated in deponent's respective districts. In some of the districts of said county these trees have already become extinct.

Many other varieties of trees are showing similar effects and are dying in substantially the same way though requiring a greater length of time. Among these may be found the white pine, hemlock, white oak, the post-oak and other varieties. Enormous quantities of these varieties are now in process of dying, the leaves wither and fall prior to the natural order of things. The leaves upon the white pine turn yellow. The trees disclose to the eye at a glance that they are in process of death. Trees showing these outward signs in the late summer often do

not put out the following spring. The trees thus affected will not put out at the top. This ,the most exposed part of the tree is more quickly and readily affected than the under part which is to a greater or less extent protected by the surrounding trees and undergrowth. The trees die from the top toward the bottom.

Deponents do not know of any other cause from which the results indicated could spring than that of the haze or mist above mentioned. There is no other haze, mist, vapor or fumes in said county from any other cause. There has been during said period of time no peculiar or unusual climatic changes. There has been nothing unusual in any other physical or natural condition of affairs. There has been neither unusual drouth, nor excessive rainfall.

Each of deponents has been ordinarily familiar with the usual insects and bugs which have been found for many years in his respective district. He has not within the past two or three years noticed or observed anything unusual either in number or variety of this form of natural life.

Deponents state that upon repeated occasions the haze or vapor mentioned above would in the spring and summer settle upon the earth and come in physical contact with the crops that have been planted. In a single night after these fumes thus described would touch thevegetation it would be either entirely destroyed or seriously injured. It would wither and turn yellow as if a heavy frost had fallen upon it though no frost had touched it. would touch the vegetation it would be either entirely destroyed

The same effect as that above described would be noticed upon the various orchards after one or more visitations, either the fruit being entirely destroyed or the product being small, dwarfed fruit entirely unfit for use.

Deponents state that in some of the districts of Fannin County a number of farms have been abandoned because of the settling of these sulphur fumes from the defendants' furnaces upon the farm. Prior to the last few years none of these farms had to deponent's knowledge been afflicted in the way described. Said farms prior to said times had been cultivated in the usual ordinary way and produced the usual ordinary results.

Deponents state from their knowledge of farming that no farm can be successfully conducted when it is subjected to the results above indicated, and from their knowledge of such farms, the physical conditions which exist and the experiences related and had by them with the sulphur fumes, it is their opinion, based upon the facts above given, that during the coming year a very large further number of farms in said county will be abandoned. It is a fact that farming operations cannot be successfully carried on under the conditions enumerated.

Subscribed and sworn to before me this January 1906.

Stephen Griffin, resident 53 years, district 8, section 2, Farmer.
T. P. Jenkins, resident 20 years, district 8, section 2, Farmer.
E. J. McClure, resident 45 years, district 8, section 2, Farmer.
M. B. Williamson, resident 49 years, district 9, section 2, Farmer.
J. D. Land, resident 46 years, district 8, section 2, Farmer.
R. W. Nichols, resident 33 years, district 7, section 1, Merchant.
J. E. Crawford, resident 53 years, district 7, section 1, Farmer.
T. J. Wilson, resident 50 years, district 8, section 1, Farmer.
W. T. Panter, resident 33 years, district 8, section 1, Farmer.
W. H. German, resident 33 years, district 8, section 1, Farmer.
Ben. C. Arp, resident 55 years, district 8, section 2, Farmer.
W. S. Bailey, resident 39 years, district 7, section 1, Farmer.
R. L. Curtis, resident 34 years, district 8, section 1, Farmer.
Hanson Orton, resident 38 years, district 7, section 1, Farmer.
Thos. R. Johnson, resident 44 years, district 8, section 2, Farmer and Lumberman.
U. S. Arp, resident 32 years, district 8, section 2, Farmer.
S. M. Baugh, resident 40 years, district 8, section 2, Farmer.
J. E. Cochran, resident 45 years, district 8, section 2, Farmer.
J. J. Crawford, resident 34 years, district 8, section 2, Farmer.
W. R. Cole, resident 58 years, district 8, section 1, Farmer.
W. T. S. Dickey, resident 42 years, district 8, section 2, Farmer and Office.
A. G. Roberson, resident 25 years, district 8, section 2, Farmer.
Will McNelly, resident 22 years, district 8, section 2, Merchant.
J. W. Farmer, resident 45 years, district 8, section 2, Farmer.
G. P. Dickey, resident 52 years, district 8, section 2, Merchant.

Jim Dickey, resident 21 years, district 8, section 2, Farmer and Clerk.
J. B. Dickey, resident 50 years, district 8, section 2, Farmer.
S. P. Russel, resident 20 years, district 8, section 1, Farmer.
J. W. Chapman, resident 3 years, district 8, section 2, Farmer.
H. Mull, resident 22 years, district 8, section 2, Farmer.
J. H. Gibbs, resident 32 years, district 8, section 2, Farmer.
J. E. McNelley, resident 24 years, district 8, section 2, Office.
W. C. Ballew, resident 20 years, district 8, section 2, Farmer.
J. M. Dye, resident 39 years, district 8, section 2, Farmer.
A. F. Mull, resident 25 years, district 8, section 2, Farmer.
W. K. Dillard, resident 41 years, district 8, section 2, Farmer.
J. P. Dilard, resident 53 years, district 8, section 2, Farmer.
J. W. Chastain, resident 12 years, district 8, section 2, Lumberman.
O. Q. Briant, resident 21 years, district 8, section 1, Lumberman.
J. J. Newton, resident 50 years, district 8, section 2, Farmer.
A. J. Kayloe, resident 35 years, district 8, section 2, Farmer.
R. Wolford, resident 25 years, district 8, section 2, Farmer.
W. C. Bowlin, resident 18 years, district 8, section 2, Merchant.
A. J. Odom, resident 52 years, district 8, section 2, Merchant
J. R. Willis, resident 50 years, district 8, section 2, Merchant.
J. R. Ballew, resident 43 years, district 8, section 2, Farmer.
W. T. Buchanan, resident 36 years, district 8, section 2, Farmer.
T. T. Fain, resident 50 years, district 8, section 2, Physician.
W. A. Daves, resident 48 years, district 7, section 1, Ordinary and Farmer.
W. G. Owenby, resident 7 years, district 8, section 2, Merchant.
J. H. Stuart, resident 48 years, district 8, section 2, Farmer.
M. A. Brackett, resident 12 years, district 8, section 1, Farmer.
John W. Anderson, resident 51 years, district 8, section 2, Farmer and Merchant.
G. W. Ross, resident 63 years, district 8, section 2, Farmer.
W. L. Hunter, resident 40 years, district 8, section 2, Farmer.
J. F. McNelly, resident 40 years, district 8, section 2, Merchant.
J. M. Ledford, resident 6 years, district 8, section 2, Farmer.
R. M. Cook, resident 18 years, district 7, section 1, Farmer.
C. G. Baugh, resident 49 years, district 8, section 2, Timberman.

M. S. Mull, resident 8 years, district 8, section 2, Farmer.
J. N. Barnes, resident 4 years, district 8, section 1, Farmer.
W. J. Witt, resident 24 years, district 8, section 2, Farmer.
C. J. Corn, resident 23 years, district 8, section 2, Farmer.
C. E. Gilbertson, resident 2 years, district 8, section 2, Superintendent Blue Ridge Tannery.
M. Farmer, resident 39 years, district 8, section 2, Farmer.
G. D. Brackett, resident 12 years, district 8, section 2, Farmer.
Grant Gee, resident 33 years, district 7, section 2, Farmer.
A. B. Davis, resident 30 years, district 8, section 2, Farmer.
J. W. Thomas, resident 20 years, district 8, section 2, Farmer.
R. D. Blanton, resident 1 year, district 8, section 2, Farmer.
R. L. Buchanan, resident 28 years, district 8, section 2, Farmer.
A. W. Henson, resident 10 years, district 8, section 2, Farmer.
T. W. Davis, resident 10 years, district 8, section 2, Farmer.
J. M. Falls, resident 40 years, district 8, section 2, Farmer.
J. W. Dye, resident 21 years, district 8, section 2, Farmer.
Fred Forrester, resident 16 years, district 8, section 2, Farmer.
W. D. Hull, resident 45 years, district 8, section 2, Farmer.
J. W. Elrod, resident 9 years, district 8, section 2, Farmer.
T. M. Dillard, resident 56 years, district 8, section 2, Farmer.
J. A. Self, resident 2 years, district 8, section 1, Lumber.
Dock Garren, resident 16 years, district 8, section 2, Farmer.
G. W. Wilson, resident 40 years, district 8, section 2, Farmer.
J. R. Queen, resident 1 year, district 8, section 2, Farmer.
William H. Davenport, resident 65 years, district 8, section 2, Farmer.
J. R. Ballee, resident 43 years, district 8, section 2, Farmer.
Andrew Henson, resident 37 years, district 8, section 2, Farmer.
J. A. Allison, resident 10 years, district 8, section 2, Miller.
J. W. Dickey, resident 28 years, district 8, section 2, Farmer.
W. M. Harper, resident 50 years, district 8, section 2, Farmer.
John E. Harper, resident 50 years, district 8, section 2, Farmer.
G. W. Flowers, resident 10 years, district 8, section 2, Farmer.
Geo. Handcock, resident 50 years, district 8, section 2, Farmer.
John Farmer, resident 37 years, district 8, section 2, Farmer.
James G. Brock, resident 41 years, district 8, section 2, Farmer.
G. M. Dickey, resident 50 years, district 8, section 2, Merchant.

G. P. Ross, resident 25 years, district 8, section 2, Farmer.
C. J. Trammell, resident 40 years, district 8, section 2, Lumberman.
Jas. Stepp, resident 5 years, district 8, section 2, Farmer.
James Curtis, resident 45 years, district 8, section 2, Farmer.
W. B. Lovingood, resident 40 years, district 8, section 2, Farmer.
W. M. Allen, resident 30 years, district 8, section 2, Farmer.
C. M. Butt, resident 25 years, district 8, section 2, Merchant.
J. A. Freeman, resident 2 years, district 8, section 2, Farmer.
T. S. Smith, resident 40 years, district 8, section 2, Farmer.
P. J. Kincaid, resident 35 years, district 7, section 2, Farmer.
Frank Smith, resident 25 years, district 8, section 2, Farmer.
G. B. Crawford, resident 22 years, district 8, section 2, Farmer.
W. L. Conley, resident, 28 years, district 8, section 2, Farmer.
Thos H. Crawford, resident 27 years, district 8, section 2, County Treasurer.
W. W. Findley, resident 30 years, district 8, section 2, Farmer.
W. A. Wilson, resident 47 years, district 8, section 2, Farmer.
R. E. Green, resident 35 years, district 7, section 2, Farmer.
Brook E. Davenport, resident 27 years, district 8, section 2, Farming.
A. B. Dickey, resident 61 years, district 8, section 2, Farmer.
Thos. J. Wilson, resident 49 years, district 8, section 2, Farmer.
A. A. Thurma, resident 23 years, district 8 section 2, Farmer.
Elard Wilson, resident 22 years, district 8, section 2, Farmer.
Bruce Mull, resident 12 years, district 8, section 2, Farmer.
J. C. Abercrombie, resident 27 years, district 8, section 2, Farmer.
A. F. Christopher, residence 6 years, district 8, section 2, Physician.
N. Nichols, resident 25 years, district 8, section 2, Farmer.
John Owenby, resident 35 years, district 8, section 2, Farmer.
J. M. Black, resident 7 years, district 8, section 2, Merchant.
M. H. Gibbs, resident 25 years, district 8, section 2, Farmer.
E. W. Kincaid, resident 54 years, district 8, section 2, Farmer.
Hix Carter, resident 56 years, district 8, section 2, Farmer.
E. H. Newton, resident 50 years, district 8, section 2, Farmer.
W. M. Pierce, resident 15 years, district 8, section 2, Blacksmith.

A. P. Johnson, resident 30 years, district 8, section 2, Merchant.
T. A. Terrell, resident 17 years, district 8, section 2, D. D. S.
Edgar W. Butt, resident 31 years, district 8, section 2, Merchant.
F. C. Willis, resident 26 years, district 8, section 2, Merchant.
Poly Cook, resident 29 years, district 8, section 2, Farmer.
Arthur Bailey, resident 25 years, district 8, section 2, Farmer.
Thomas Bailey, resident 21 years, district 8, section 2, Farmer.
T. G. Hall, resident 48 years, district 8, section 2, Farmer.
John A. Wilson, resident 31 years, district 8, section 2, Assistant Postmaster.
B. L. Smith, resident 32 years, district 8, section 2, Editor.
T. N. Thomas, resident 45 years, district 8, section 2, Farmer.
J. A. Green, residence 49 years, district 7, section 2, Farmer.

Sworn to and subscribed before me this January 25th, 1906.

THOS. A. BROWN,

Notary Public Union County, Georgia

IN THE SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM. 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,

County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above stated case, each deposes and says as follows:

He has been a resident of said County and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property owner in said county, and each is engaged in the business set opposite his name.

Each of deponents is familiar with the location of defendants' furnaces. Each of deponents has by reason of his residence and the particular occupation in which he is now engaged become familiar with the physical situation and characteristics of the larger part of said county. He is acquainted with the soil, and the character thereof; the streams, the timber, the various species of trees which prevail in said forests; the general values of the land for agricultural and other purposes, and the general values of the trees for lumber and timber purposes.

Each of deponents says that the land when cleared of the trees, and particularly the land which is irrigated by streams, in his particular district are fertile, readily cultivated and produce in paying quantities corn, wheat and other crops. The soil is specially adapted for the raising of what is termed market truck, such as tomatoes, corn, cabbage, etc.

Much of said county is devoted to agricultural purposes. The farms as a rule have heretofore been profitable to the owners. They have been heretofore cultivated each year and were generally in good condition.

The timber interests in said state are exceedingly large and valuable. The timber, either standing or cut, possesses a ready market. Many fine species of trees are to be found, such as the white pine, hickory, white oak, chestnut, poplar, and a large number of other varieties.

Within the past two or three years the furnaces of defendants have been smelting enormous quantitis of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is preceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents have ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of Fannin County to the knowledge of any of deponents any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle toward the earth whenever the air is dense or heavy with moisture. The odor, color, and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or

two and a half years been a matter of repeated occurrence during each month. This vapor has been generally noticed by the citizens and residents and has caused extensive comment.

Prior to said period of time the timber in the district in which deponent lives was healthy, sound, in good condition, and there was no appearance of any cause generally affecting injuriously either the timber as a whole, or operating upon any particular species. Trees would occasionally here and there die from old age and random fires, lightning, or other individual causes. These were, however, normal occurrences, and the great body and bulk of the timber was in a normal, healthful, thriving condition.

Within the period of time mentioned and since the fumes and vapors emitted by the defendants' furnaces have been noticed in the district in which each deponent resides the general condition of the forests have changed—the timber is dying rapidly. It is no longer in a healthful condition. Much of it is dead. The percentage of dead trees to live trees has passed from a natural, normal per cent to one which is entirely unnatural and abnormal. Some of the species have become practically extinct, such as the chestnut, oak, and hickory. It is a fact that in the district in which each deponent lives these two varieties of trees have been to a large extent exterminated. These trees wither, cast their leaves in the summer long prior to the fall and die almost immediately. At the present rate of mortality of these two species it is a question of but a short time until they are absolutely exterminated in deponent's respective districts. In some of the districts of said county these trees have already become extinct.

Many other varieties of trees are showing similar effects and are dying in substantially the same way though requiring a greater length of time. Among these may be found the white pine, hemlock, white oak, the post-oak and other varieties. Enormous quantities of these varieties are now in process of dying, the leaves wither and fall prior to the natural order of things. The leaves upon the white pine turn yellow. The trees disclose to the eye at a glance that they are in process of death. Trees showing these outward signs in the late summer often do

not put out at the top. This ,the most exposed part of the tree is more quickly and readily affected than the under part which is to a greater or less extent protected by the surrounding trees and undergrowth. The trees die from the top toward the bottom.

Deponents do not know of any other cause from which the results indicated could spring than that of the haze or mist above mentioned. There is no other haze, mist, vapor or fumes in said county from any other cause. There has been during said period of time no peculiar or unusual climatic changes. There has been nothing unusual in any other physical or natural condition of affairs. There has been neither unusual drouth, nor excessive rainfall.

Each of deponents has been ordinarily familiar with the usual insects and bugs which have been found for many years in his respective district. He has not within the past two or three years noticed or observed anything unusual either in number or variety of this form of natural life.

Deponents state that upon repeated occasions the haze or vapor mentioned above would in the spring and summer settle upon the earth and come in physical contact with the crops that have been planted. In a single night after these fumes thus described would touch the vegetation it would be either entirely destroyed or seriously injured. It would wither and turn yellow as if a heavy frost had fallen upon it though no frost had touched it.

The same effect as that above described would be noticed upon the various orchards after one or more visitations, either the fruit being entirely destroyed or the product being small, dwarfed fruit entirely unfit for use.

Deponents state that in some of the districts of Fannin County a number of farms have been abandoned because of the settling of these sulphur fumes from the defendants' furnaces upon the farm. Prior to the last few years none of these farms had to deponent's knowledge been afflicted in the way described. Said farms prior to said times had been cultivated in the usual ordinary way and produced the usual ordinary results.

Deponents state from their knowledge of farming that no farm can be successfully conducted when it is subjected to the re-

sults above indicated, and from their knowledge of such farms, the physical conditions which exist and the experiences related and had by them with the sulphur fumes, it is their opinion, based upon the facts above given, that during the coming year a very large further number of farms in said county will be abandoned. It is a fact that farming operations cannot be successfully carried on under the conditions enumerated.

Subscribed and sworn to before me this January 1906.

W. C. Wilson, resident 24 years, district 7, section 1, Farmer.
D. C. Pickelsimer, resident 21 years, district 7 section 1, Farmer.
J. L. Pickelsimer, resident 41 years, district 7, section 1, Farmer.
W. V. Daves, resident 31 years, district 7, section 1, Farmer.
J. E. Daves, resident 52 years, district 7, section 1, Farmer.
W. B. Legg, resident 50 years, district 7, section 1, Farmer.
G. D. Nixon, resident 25 years, district 8, section 1, Farmer.
Geo. W. Aaron, resident 50 years, district 8, section 2, Farmer.
J. A. Griffin, resident 32 years, district 8, section 2, Farmer.
D. Shell, resident 40 years, district 8, section 2, Farmer.
W. R. Godfrey, resident 42 years, district 8, section 2, Farmer.
J. A. Cash, resident 18 years, district 8, section 2, Farmer.
Jiles Green, resident 50 years, district 8, section 2, Farmer.
W. K. Chastain, resident 40 years, district 8, section 2, Farmer.
Sam McKiney, resident 30 years, district 8, section 2, Farmer.
J. C. Sisson, resident 40 years, district 8, section 2, Farmer.
J. D. Chastain, resident 10 years, district 8, section 2, Farmer.
J. T. Long, resident 10 years, district 9, section 2, Farmer.
G. W. Phillips, resident 43 years, district 9, section 2, Merchant.
J. F. Dunn, resident 48 years, district 9, section 2, Farmer.
Nebo Dunn, resident 20 years, district 9, section 2, Farmer.
T. A. Ritcie, resident 32 years, district 9, section 2, Timber.
G. W. Foster, resident 44 years, district 9, section 2, Farmer.
J. T. Jones, resident 35 years, district 9, section 2, Farmer.
James Hayes, resident 4 years, district 9, section 2, Farmer.
John Hayes, resident 2 years, district 9, section 2, Farmer.
W. T. Higdon, resident 38 years, district 9, section 2, Farmer.
G. W. Kellar, resident 55 years, district 9, section 2, Farmer.
Louis Patterson, resident 60 years, district 9, section 2, Farmer.

J. E. Yother, resident 3 years, district 9, section 2, Farmer.
Joseph Welch, resident 50 years, district 9, section 2, Farmer.
J. R. McKiney, resident 25 years, district 9, section 2, Merchant.
Frank Cabe, resident 30 years, district 9, section 2, Farmer.
J. S. Windchester, resident 5 years, district 9, section 2, Farmer.
Fanny Thomas, resident 39 years, district 9, section 2, Farmer.
G. Campbell, resident 40 years, district 9, section 2, Farmer.
John Newton, resident 18 years, district 9, section 2, Farmer.
P. W. Hice, resident 30 years, district 9, section 2, Farmer.
Ira Kincaid, resident 31 years, district 8, section 2, Farmer.
Thos. Green, resident 50 years, district 7, section 2, Farmer.
J. P. Cole, resident 56 years, district 8, section 2, Farmer.
Swinfield Standley, resident 9 years, district 7, section 2, Farmer.
S. H. Crawford, resident 50 years, district 8, section 2, Farmer.
James P. Aaron, resident 43 years, district 8, section 2, Merchant.
G. V. Cochran, resident 40 years, district 8, section 2, Sewing Machine Agent.
W. A. Anderson, resident 8 years, district 8, section 2, Pho. Agt.
J. A. Odom, resident 8 years, district 8, section 2, Farmer.
G. A. Curtis, resident 27 years, district 8, section 2, Farmer.
William Percey, resident 50 years, district 8, section 2, Farmer.
L. E. Harper, resident 50 years, district 8, section 2, Farmer.
J. H. Green, resident 21 years, district 8, section 2, Farmer.
Andy Green, resident 50 years, district 8, section 2, Farmer.
A. B. Bennett, resident 26 years, district 8, section 2, Merchant.
J. M. Ensley, resident 15 years, district 8, section 2, Farmer.
G. J. Cochran, resident 30 years, district 8, section 2, Farmer.
A. T. Glazner, resident 14 years, district 8, section 2, Farmer.
J. A. Horton, resident 4 years, district 8, section 2, Farmer.
William Tankersley, resident 50 years, district 9, section 2, Farmer.
Oscoe Dunn, resident 18 years, district 9, section 2, Farmer.
W. J. Mull, resident 47 years, district 9, section 2, Farmer.
G. W. A. Lanning, resident 44 years, district 9, section 2, Farmer.
James Walden, resident 36 years, district 9, section 2, Farmer.
H. A. Vestel, resident 25 years, district 9, section 2, Merchant.
T. C. Hayes, resident 2 years, district 9, section 2, Farmer.
Leon Higdon, resident 56 years, district 9, section 2, Farmer.

Samuel Higdon, resident 28 years, district 9, section 2, Farmer.
J. M. C. Porter, resident 35 years, district 9, section 2, Farmer.
J. F. Thomas, resident 64 years, district 9, section 2, Farmer.
L. A. Vaughn, resident 38 years, district 9, section 2, Farmer.
J. W. Mathews, resident 33 years, district 9, section 2, Farmer.
C. R. Russell, resident 3 years, district 9, section 2, Farmer.
J. A. McKiney, resident 50 years, district 9, section 2, Farmer.
W. F. Thomas, resident 50 years, district 9, section 2, Farmer.
J. B. Yother, resident 1 year, district 9, section 2, Farmer.
C. R. Parks, resident 50 years, district 9, section 2, Farmer.
J. D. Patterson, resident 29 years, district 9, section 2, Farmer.
C. M. Kincaid, resident 50 years, district 8, section 2, Farmer.
John R. Kincaid, resident 27 years, district 8, section 2, Farmer.
W. M. Kincaid, resident 24 years, district 8, section 2, Farmer.
M. Wehunte, resident 50 years, district 8, section 2, Farmer.
W. R. Cook, resident 4 years, district 8, section 2, Farmer.
Edward Dilbeck, resident 29 years, district 8, section 2, Farmer.
J. W. Higdon, resident 50 years, district 9, section 2, Farmer.
L. A. Stepp, resident 20 years, district 8, section 2, Farmer.
G. A. Stepp, resident 16 years, district 8, section 2, Farmer.
W. W. Underwood, resident 21 years, district 8, section 2, Farmer.
W. C. Underwood, resident 16 years, district 8, section 2, Farmer.
John M. Thomas, resident 52 years, district 8, section 2, Farmer.
Arthur Miolen, resident 3 years, district 9, section 2, Farmer.
Anderson Cook, resident 30 years, district 8, section 2, Farmer.
W. M. Smith, resident 30 years, district 8, section 2, Farmer.
S. J. Green, resident 30 years, district 8, section 2, Farmer.
R. M. Cole, resident 14 years, district 9, section 2, Farmer.
Charlie Kincaid, resident 19 years, district 8, section 2, Farmer.
Alfred Wehunte, resident 50 years, district 8, section 2, Farmer.
J. D. Brewer, resident 5 years, district 8, section 2, Farmer.
E. H. Thomas, resident 34 years, district 8, section 2, Farmer.
Wm. M. Cox, resident 45 years, district 8, section 2, Farmer.
J. N. Stepp, resident 40 years, district 8, section 2, Farmer.
Jas. Godfrey, resident 35 years, district 8, section 2, Farmer.
Frank Burk, resident 50 years, district 8, section 2, Farmer.

Stephen Dilbeck, resident 53 years, district 8, section 2, Farmer.
P. P. Chastain, resident 20 years, district 8, section 2, Farmer and Justice Peace.
J. R. Davenport, resident 22 years, district 8, section 2, Farmer.
H. M. Anderson, resident 8 years, district 8, section 2, Farmer.
J. V. Brown, resident 5 years, district 8, section 2, Farmer.
B. M. Milsaps, resident 24 years, district 9, section 2, Farmer.
R. A. Clark, resident 12 years, district 6, section 1.

Sworn to and subscribed to before me, this January 30th, 1906.

THOS. A. BROWN,
Notary Public, Fannin County, Georgia.

IN THE SUPREME COURT OF THE UNITED STATES,

OCTOBER TERM. 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,

County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above stated case, each deposes and says as follows:

He has been a resident of said County and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property owner in said county, and each is engaged in the business set opposite his name.

Each of deponents is familiar with the location of defendants' furnaces. Each of deponents has by reason of his residence and the particular occupation in which he is now engaged become familiar with the physical situation and characteristics of the larger part of said county. He is acquainted with the soil, and the character thereof; the streams, the timber, the various species of trees which prevail in said forests; the general values of the land for agricultural and other purposes, and the general values of the trees for lumber and timber purposes.

Each of deponents says that the land when cleared of the trees, and particularly the land which is irrigated by streams, in his particular district are fertile, readily cultivated and produce in paying quantities corn, wheat and other crops. The soil is specially adapted for the raising of what is termed market truck, such as tomatoes, corn, cabbage, etc.

Much of said county is devoted to agricultural purposes. The farms as a rule have heretofore been profitable to the owners. They have been heretofore cultivated each year and were generally in good condition.

The timber interests in said state are exceedingly large and valuable. The timber, either standing or cut, possesses a ready market. Many fine species of trees are to be found, such as the white pine, hickory, white oak, chestnut, poplar, and a large number of other varieties.

Within the past two or three years the furnaces of defendants have been smelting enormous quantitis of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is preceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents have ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of Fannin County to the knowledge of any of deponents any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle toward the earth whenever the air is dense or heavy with moisture. The odor, color, and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or

two and a half years been a matter of repeated occurrence during each month. This vapor has been generally noticed by the citizens and residents and has caused extensive comment.

Prior to said period of time the timber in the district in which deponent lives was healthy, sound, in good condition, and there was no appearance of any cause generally affecting injuriously either the timber as a whole, or operating upon any particular species. Trees would occasionally here and there die from old age and random fires, lightning, or other individual causes. These were, however, normal occurrences, and the great body and bulk of the timber was in a normal, healthful, thriving condition.

Within the period of time mentioned and since the fumes and vapors emitted by the defendants' furnaces have been noticed in the district in which each deponent resides the general condition of the forests have changed—the timber is dying rapidly. It is no longer in a healthful condition. Much of it is dead. The percentage of dead trees to live trees has passed from a natural, normal per cent to one which is entirely unnatural and abnormal. Some of the species have become practically extinct, such as the chestnut, oak, and hickory. It is a fact that in the district in which each deponent lives these two varieties of trees have been to a large extent exterminated. These trees wither, cast their leaves in the summer long prior to the fall and die almost immediately. At the present rate of mortality of these two species it is a question of but a short time until they are absolutely exterminated in deponent's respective districts. In some of the districts of said county these trees have already become extinct.

Many other varieties of trees are showing similar effects and are dying in substantially the same way though requiring a greater length of time. Among these may be found the white pine, hemlock, white oak, the post-oak and other varieties. Enormous quantities of these varieties are now in process of dying, the leaves wither and fall prior to the natural order of things. The leaves upon the white pine turn yellow. The trees disclose to the eye at a glance that they are in process of death. Trees showing these outward signs in the late summer often do

not put out the following spring. The trees thus affected will not put out at the top. This ,the most exposed part of the tree is more quickly and readily affected than the under part which is to a greater or less extent protected by the surrounding trees and undergrowth. The trees die from the top toward the bottom.

Deponents do not know of any other cause from which the results indicated could spring than that of the haze or mist above mentioned. There is no other haze, mist, vapor or fumes in said county from any other cause. There has been during said period of time no peculiar or unusual climatic changes. There has been nothing unusual in any other physical or natural condition of affairs. There has been neither unusual drouth, nor excessive rainfall.

Each of deponents has been ordinarily familiar with the usual insects and bugs which have been found for many years in his respective district. He has not within the past two or three years noticed or observed anything unusual either in number or variety of this form of natural life.

Deponents state that upon repeated occasions the haze or vapor mentioned above would in the spring and summer settle upon the earth and come in physical contact with the crops that have been planted. In a single night after these fumes thus described would touch the vegetation it would be either entirely destroyed or seriously injured. It would wither and turn yellow as if a heavy frost had fallen upon it though no frost had touched it.

The same effect as that above described would be noticed upon the various orchards after one or more visitations, either the fruit being entirely destroyed or the product being small, dwarfed fruit entirely unfit for use.

Deponents state that in some of the districts of Fannin County a number of farms have been abandoned because of the settling of these sulphur fumes from the defendants' furnaces upon the farm. Prior to the last few years none of these farms had to deponent's knowledge been afflicted in the way described. Said farms prior to said times had been cultivated in the usual ordinary way and produced the usual ordinary results.

Deponents state from their knowledge of farming that no farm can be successfully conducted when it is subjected to the results above indicated, and from their knowledge of such farms, the physical conditions which exist and the experiences related and had by them with the sulphur fumes, it is their opinion, based upon the facts above given, that during the coming year a very large further number of farms in said county will be abandoned. It is a fact that farming operations cannot be successfully carried on under the conditions enumerated.

Subscribed and sworn to before me this January 30, 1906.

G. D. NIXON, N. P. and J. P.

J. R. Chastain, resident 49 years, Morganton District.
R. M. Chastain, resident 66 years, Morganton District.
L. C. Smith, resident 54 years, Morganton District.
J. C. Powell, resident 32 years, Morganton District.
A. S. J. Ledford, resident 33 years, Yocoah District.
J. L. Stewart, resident 15 years, Yocoah District.
T. H. Stephens, resident 20 years, Noontootly District.
J. T. German, resident 37 years, Morganton District.
W. E. Rodgers, resident 6 years, Morganton District.
W. H. White, resident 1 year, Morganton District.
J. T. Bivins, resident 24 years, Hemptown District.
Samuel Anthoney, resident 2 years, Morganton District.
J. M. Cook, resident 28 years, Hemptown District.
John Wlson, resident 44 years, Hemptown District.
T. K. Cook, resident 28 years, Hemptown District. Farmer.
M. B. Weaver, resident 6 months, Hemptown District. Farmer.
H. E. Wilson, resident 20 years, Hemptown District.
James A. Bruce, resident 45 years, Hemptown District. Farmer.
J. R. Hunter, resident 50 years, Hemptown District. Farmer.
L. W. Bivins, resident 55 years, Hemptown District. Farmer.
J. C. Morris, resident 31 years, Hemptown District.
A. H. Morris, resident 40 years, Hemptown District.
W. O. Davenport, resident 32 years, Hemptown District. Merchant.
W. J. Hayes, resident 1 year, Hemptown District.

Adam Davenport, resident 32 years, Morganton District. Farming.
T. J. Medears, resident 30 years, Morganton District. Farming.
James R. Allen, resident 30 years, Morganton District. Farming.
R. S. Self, resident 6 months, Morganton District. Farming.
J. A. Moore, resident 50 years, Morganton District. Farmer.
R. L. Brown, resident 6 years, Hemptown District. Farming.
J. S. Chastain, resident 40 years. Morganton District.
J. E. Patterson, resident 6 years, Blueridge District.
J. B. Crawford, resident 30 years, Morganton District.
J. P. German, resident 45 years, Morganton District.
John Thomas, resident 56 years, Sugar Creek District.
W. J. Bennett, resident 38 years, Toccoa District.
W. J. Franklin, resident 34 years, Mobile District.
W. J. Ballew, resident 16 years, Mobile District.
H. J. Ballew, resident 1 year, Mobile District.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
County of Fannin.

Personally appeared the hereinafter subscribed parties, who, after being duly sworn in the above styled and numbered cause, depose and say in relation to said cause as follows:

Each of the deponents whose names are signed to this affidavit is a resident and citizen of and land owner in said State and county, said lands being situate within the locality affected by the sulphur fumes, smokes and noxious gases from the copper plants situated in Polk county, Tennessee, just across the State line. During the last two or three years great quantities of timber have been killed within the locality wherein deponents reside, and many crops and orchards have failed, notwithstanding the weather conditions have been favorable for their growth, and gardens have been greatly injured and often utterly ruined.

The sulphur fumes and poisonous gases now being generated by the defendants' copper plants located and operated

by defendant companies just across the Tennessee State line in Polk county, are frequently seen and observed in the vicinity in which deponents respectively reside. Not only is the presence of said fumes and gases distinguishable by their unpleasant odor, but often to the eye, the said fumes and gases having appearance of haze or vapor.

The death of the timber and vegetation, and the general ruin of the crops, orchards and gardens have occurred only since the appearance of said fumes in the localities wherein deponents reside, and the destruction of the timber, crops, gardens and other vegetation can be attributed to no other source.

If these fumes and gases are still permitted to flow over and spread out on the lands in said localities, laden as they are with great quantities of poisonous sulphur, much valuable and productive lands, if left unaffected by these deadly fumes, will be rendered practically valueless. Already some farms have been, in fact, abandoned on this account, and if said fumes are not stopped before the spring planting is commenced this year numbers of farmers in the State of Georgia, and especially in this (Fannin) county will be forced to let their farms run wild, as the same can not be profitably cultivated so long as they are exposed to the disastrous effects of these deadly and poisonous sulphur fumes generated by the defendant companies at their copper plants.

Deponents have frequently seen instances of crops growing on lands and vegetables in gardens killed in a single day or night. The smoke and sulphur fumes on such occasions would seem to come down to the earth and cling to vegetation, said fumes at these times being noticeably strongly impregnated with sulphur, and within a few hours vegetation withers and becomes blighted, although in the summer time crops and other vegetation then have the appearance of being severely frost bitten.

Deponents further say that the timber destroyed as heretofore set forth often stands on the roadsides and menaces the safety and free passage over said roads, and by cotninually

falling into said roads necessitates the frequent calling out of the road hands or other persons for the purpose of removing such dead and dying timber to keep the roads open and to prevent injury to persons passing thereon. In some sections and localities the entire timber and vegetation has been killed and destroyed, and in these localities by the killing of all the timber and vegetation the top soil, especially in hilly and sloping places, suffers greatly from washes as do, in consequence, the roads and highways, holes, gullies and washouts being caused thereby and the roads otherwise injured and damaged.

W. G. Thomas,	A. S. J. Ledford,
John Warren,	D. M. Buchanan,
L. W. Smith,	R. M. Chastain,
T. A. Terrell,	R. L. Phillips,
J. C. Long,	J. H. Long,
Homer P. Legg,	W. R. Godfrey,
W. A. Daves,	W. R. Cook.

Sworn to and subscribed to before me, this January 16th, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
County of Fannin.

Personally appeared, the hereinafter subscribed parties, who being duly sworn in the above styled and numbered cause, depose and say as follows: "Each deponent is a resident citizen and landowner in said county and State, said lands being within the locality affected by the sulphur fumes from the copper plants situated in Polk county, Tennessee. During the past two or three years great quantities of timber have been killed within the locality in which deponents reside, and many crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and often utterly ruined. The sulphur fumes generated by the defendant copper plants just across the Tennessee State line in Polk county are frequently in said vicinity in which these deponents reside. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of haze or vapor.

The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from said copper plants and works made their appearance in the locality wherein deponents reside, and the destruction of timber and vegetation can be attributed to no other source. If the fumes are permitted to flow over the locality in which deponents reside, laden as they are with great quantities of poisonous sulphur, much valuable property will be practically made worthless. Already some farms have been abandoned on this account, and if said fumes are not stopped before the spring planting this year, numbers of the farmers within the State of Georgia, and especially in this county, will be forced to let the farms run wild, as the same can not be made productive so long as they are subjected to the poisonous gases of the copper companies.

Deponents have frequently seen instances of crops on lands and gardens or vegetables killed in a single night or day. The sulphur fumes would on such occasions seem to suddenly come down on to the earth and cling to it, the fumes being at these times noticeably strong, and soon, or at least, within a few hours the vegetation growing on said lands and gardens is seen to wither and become blighted, and although in summer, the same would appear as though it had been severely frost-bitten.

his
J. P. X Ellis,
mark.
C. G. Baugh,
Geo. V. Cochran,
Thos. R. Johnson,
Anderson Cook,
J. T. Ledford,
S. H. Green,
Thos. Green,
C. M. Kincaid,
E. H. Seabolt,
P. M. C. Porter,
J. A. Fortner,
John E. Harper,
T. H. Crawford,
R. D. Ralston,
Wm. Grantlan,
J. R. Ballew,
R. E. Green,
D. R. Ballew,
W. D. Cruse,
John Inall,
his
John X Fanin,
mark.

James M. Davis,
J. S. Kincaid,
S. J. Genson,
his
Geo. X W. Wright,
mark.
J. L. Farmer,
his
Ralph X Berner,
mark.
M. H. White,
W. M. Woody,
S. A. Spark,
A. L. Standridge,
W. T. Panter,
A. B. Clement,
his
A. E. X Cox,
mark.
J. R. Hunter,
W. O. Davenport,
J. W. Garrison,
Adam Davenport,
M. Hecter Goss,
W. H. Genson,
J. L. Stewart,
J. C. Ledford,
his
J. B. X Brand,
mark.
his
A. M. X Wright,
mark.
W. J. Ballew,
H. J. Ballew,
H. P. Hyde,
J. A. Freeman,
his
David X Richardson,
mark.
L. C. Allen,
C. W. Lanes,
R. S. Self,
W. M. Whittle,
G. W. Bryan,
J. S. Bryan.

Sworn to and subscribed before me, this the 2d day of January, 1906.

THOS. A. BROWN,
Notary Public Fannin County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Fannin County.

Personally appeared before me, a notary public of said county and State, the hereinafter named witnesses, who being duly sworn deposes and say on oath in relation to the above styled and numbered case, that each of them are either citizens and residents of Polk county, Tennessee, or Cherokee county, North Carolina, residing near the State line between the States of Georgia and Tennessee and the counties of Fannin and Polk in the States of Georgia, Cherokee, North Carolina and Tennessee, respectively, and that each of them are well acquainted with the conditions which have prevailed in the county of Fannin, State of Georgia, for the past several years. Affiants know that lands situated in said county of Fannin have been affected by the sulphur fumes from the copper plants of defendant companies located just across the State line between the two States in the said county of Polk in Tennessee. During the last two or three years great quantities of timber have been killed in the county of Fannin, and many crops and orchards have failed,

notwithstanding the weather conditions have been favorable, and gardens have been greatly injured and often utterly ruined.

The sulphur fumes and poisonous gases now being generated by the companies' copper plants, located as before stated, are frequently observable in the county of Fannin. Not only is the presence of said fumes and gases distinguishable by their unpleasant odor, but often to the eye, the said fumes and gases having the appearance of haze or vapor The death of the timber and vegetation, and the general ruin of crops, orchards and gardens in Fannin county, have occurred only since the said copper fumes and gases have made their appearance in said county, and can be attributed to no other source.

Deponents have frequently seen instances of crops growing on lands and vegetables in gardens in said county killed in a single day. The sulphur gases on such occasions would apparently come down upon the earth and cling to vegetation and timber, said fumes and gases at these times being noticeably strongly impregnated with sulphur, and within a few hours vegetation and the leaves of trees wither and have the appearance of having been frost-bitten.

Before the fumes and gases generated by the defendant-companies' copper plants made their appearance in said county of Fannin, as before herein stated, the lands and soil of said county were well adapted to agriculture and to the growth and production of wheat, rye, oats, corn, potatoes, cabbage, etc. But now since these various crops have been so injuriously affected by said gases, the pursuit of agriculture in said county has become unprofitable, and is becoming more so every year, and if these gases are not cared for and controlled in some way, the entire county will have to be abandoned in so far as the pursuit of agriculture is concerned. The extent of the territory in said county and adjoining counties in the States of Georgia, North Carolina and Tennessee affected by the said fumes and gases is being extended each and every year. The same conditions which prevail in

the county of Fannin, as herein above detailed, are equally true with reference to the county of Polk in Tennessee, and Cherokee in the State of North Carolina, all three of these counties being adjacent to the copper plants of defendant-companies, which are located near the line of each county, defendants being equally well acquainted with the conditions as they exist in each county with reference to the effect the said fumes and gases has had and is having upon the timber, crops, gardens, vegetation and lands of each of these counties. The residents of deponents is placed opposite the names of affiants.

J. M. Simonds, Cherokee County, N. C.
E. G. Culberson, Cherokee Co., N. C.
W. S. Johnson, Cherokee Co., N. C.
J. C. Cook, Cherokee Co., N. C.
W. C. Ballew, Cherokee Co., N. C.
J. R. Simonds, Cherokee Co., N. C.
A. J. Bell, Cherokee Co., N. C.
F. R. Carter, Cherokee Co., N. C.
A. E. Cloer, Cherokee Co., N. C.
F. A. Carter, Cherokee Co., N. C.
C. H. Hairs, Cherokee Co. N. C.
S. H. Rodgers.
W. L. Garren, Cherokee Co., N. C.
J. M. Garren, Cherokee Co., N. C.
J. W. Bell, Polk Co., Tenn.
S. N. Garren, Cherokee Co., N. C.
J. M. Withrow, Cherokee Co., N. C.
E. J. Carter.
N. A. Carter.
E. B. Carter.
F. D. Hamilton,
E. B. Cloer.
E. F. Bandy.
I. C. Cloer.

Sworn to and subscribed to before me this January 26, 1906.

THOMAS A. BROWN,
Notary Public, Fannin County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
County of Fannin.

Personally appeared the hereinafter subscribed parties, who being duly sworn in the above styled and numbered cause depose and say as follows: "Each deponent is a resident citizen and landowner in said county and State, said lands being within the locality affected by the sulphur fumes from the copper plants situated in Polk county, Tennessee. During the past two or three years great quantities of timber have been killed within the locality in which deponents reside, and many crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and often utterly ruined. The sulphur fumes generated by the defendant copper plants, just across the Tennessee State line in Polk county, are frequently in said vicinity in which these deponents reside. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of haze or vapor. The death of the

imber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from said copper plants and works made their appearance in the locality wherein deponents reside, and the destruction of timber and vegetation can be attributed to no other source. If the fumes are permitted to flow over the locality in which deponents reside, laden as they are with great quantities of poisonous sulphur, much valuable property will be practically made worthless. Already some farms have been abandoned on this account, and if said fumes are not stopped before the spring planting this year, numbers of the farmers within the State of Georgia, and especially in this county, will be forced to let their farms run wild, as the same can not be made productive so long as they are subjected to the poisonous gases of the copper companies.

Deponents have frequently seen instances of crops on lands and gardens or vegetables killed in a single night or day. The sulphur fumes would on such occasions seem to suddenly come down on to the earth and cling to it, the fumes being at these times noticeably strong, and soon, or at least within a few hours, the vegetation growing on said lands and gardens is seen to wither and become blighted, and although in summer, the same would appear as though it had been severely frostbitten.

M. R. Williamson, Sr.,
G. M. Long,
John O. Green,
W. P. Davenport,
M. F. Davenport,
W. R. Stewart,
B. F. Davenport,
A. F. Thomas,
J. N. Patterson,
A. H. Chastain,
Gails Green,
John B. Tipton,
L. A. Vaughn,
A. J. Warn,
J. M. Halum,
Wm. H. Dunn,
John Farmer,
G. C. Stepp,
Thos. J. Wilson,
G. B. Walker,
J. F. Ledford,
E. D. Ledford,
W. G. Thomas,
J. A. Elrod,

D. Shell,	A. F. Jones, R. T. R.,
Thomas Jenkins,	John Thomas,
W. H. Mull,	E. D. Patton,
E. J. McClure,	Wm. Roberson,
T. F. Dillingham,	T. J. Leadford,
John Merrell,	J. D. Land,
W. E. C. Curtis,	W. M. Barnes,
M. I. Mull,	W. T. Higdon,
M. R. Williamson, Jr.,	E. B. Stanley,
Wm. M. Cox,	W. T. Buchanan,
James M. Jones,	C. J. Trammell,
Jacob Weaver,	W. F. Stanley,
Samuel Young,	R. C. Miller,
J. J. Duke,	W. G. Tipton,
W. R. Patton,	W. E. Thomas,
James Roberson,	S. J. Green.

Sworn to and subscribed to before me this the 16th day of January, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
County of Fannin.

Personally appeared, the persons whose names are hereto subscribed, before the undersigned, a notary public for the said county of Fannin and State of Georgia, and who, after being duly sworn depose and say on oath that each of them are well acquainted with the conditions prevailing, industrially, and otherwise, in the said county of Fannin. The voting population of the county is about 2,500, and the population, all told, is about 14,000. There are in the city of Blue Ridge and the town of Mineral Bluff, the principal towns in said county, a population combined of about 2,500, the same having greatly increased within the year or two, due almost entirely to the demand for employment offered in Blue Ridge by the shops maintained there by the Louisville & Nashville railroad and other work provided along the line of this road by the said company, and to the establishment of the Blue Ridge Tannery at Mineral Bluff, which affords employment to a large number of hands. There are not more than

three hundred of the citizens of Fannin county engaged and employed by either the Ducktown, Sulphur, Iron and Copper Company (Limited) or the Tennessee Copper Company, the defendants in the above styled and numbered case. Nine tenths of the people of said county are engaged in farming, lumbering and stock raising, but the greater number are engaged in farming. While the territory embraced in Fannin county is somewhat hilly, yet the soil for the most part is fertile and productive, especially along the numerous valleys which traverse the county, and produce the usual crops grown in this latitude to an extent equal to any other part of the State of Georgia. Some lands in this county have been known to produce from 40 to 60 bushels of corn to the acre, and from 15 to 20 of wheat.

J. R. Kincaid,	S. H. Green,
J. H. Davis,	W. C. Boling,
W. W. Findley,	B. L. Smith,
J. E. Findley,	John G. Crawford,
Stephen Griffin,	Geo. V. Cochran,
R. E. Green,	Jno. A. Wilson,
T. T. Fain,	W. A. Daves,
Thos. H. Crawford,	W. B. Lovingood,
W. A. Wilson,	P. P. Chastain.

Sworn to and subscribed to before me this January 11th, 1906.

THOS. A. BROWN,
Notary Public, Fannin County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
County of Fannin.

In person appeared before the undersigned, Clerk of the Superior Court, of said county and State, Thos. A. Brown, who being duly sworn deposes and says on oath that he is a notary public in and for the said county of Fannin, and that he is acquainted with all the persons whose signatures appear to an affidavit hereto annexed, that said affidavit was signed before this affiant as such above stated notary, on this day, and that all of said persons are creditable and well-known citizens of said county; that J. R. Kincaid is Clerk of the Superior Court of Fannin county, J. H. Davis an ex-clerk of said court, W. W. Findley is a prominent citizen, J. E. Findley is a deputy sheriff of the county, Stephen Griffin is a well-known citizen, Thos. H. Crawford is the present county treasurer, W. A. Wilson, P. P. Chastain and S. H. Green are acting Justices of the Peace in and for said county, W. C. Boling is a prominent merchant of Blue Ridge, and an ex-chairman of the Democratic Executive

Committee of the county of Fannin, John J. Crawford and Geo. V. Cochran are ex-justices of the peace for said county, John A. Wilson is assistant postmaster at Blue Ridge, W. A. Daves is the present ordinary of said county, while W. B. Lovingood is the present sheriff of the county, R. E. Green is a constable and B. L. Smith is connected with the publication of *The Southern World*, a newspaper published at Blue Ridge in said county. THOS. A. BROWN.

Sworn to and subscribed before me, this January 11, 1906.

J. R. KINCAID,
Clerk Superior Court, Fannin County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
County of Fannin.

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Each of the deponents whose names are signed to this affidavit is a resident and citizen of, and landowner or farmer in said State and county, said lands being situate within the locality affected by the sulphur fumes, smokes and noxious gases from the copper plants situated in Polk county, Tennessee, just across the State line. During the last two or three years great quantities of timber have been killed within the locality wherein deponents reside, and many crops and orchards have failed, notwithstanding the weather conditions have been favorable for their growth, and gardens have been greatly injured and often utterly ruined.

The sulphur fumes and poisonous gases now being generated by the defendants' copper plants located and operated by defendant companies just across the Tennessee State line in Polk county are frequently seen and observed in the vicinity in which deponents respectively reside. Not only is the presence of said fumes and gases distinguishable by their unpleasant odor, but often to the eye, the said fumes and gases having the appearance of haze or vapor.

The death of the timber and vegetation, and the general ruin of the crops, orchards and gardens have occurred only since the appearance of said fumes in the localities wherein deponents reside, and the destruction of the timber, crops, gardens and other vegetation can be attributed to no other source.

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generated by the defendant companies at their copper plants.

Deponents have frequently seen instances of crops growing on lands and vegetables in gardens killed in a single day or night. The smoke and sulphur fumes on such occasions would seem to come down to the earth and cling to vegetation, said fumes at these times being noticeably strongly impregnated with sulphur, and within a few hours vegetation withers and becomes blighted; although in the summer time, crops and other vegetation then have the appearance of being severely frostbitten.

Deponents further say that the timber destroyed as heretofore set forth often stands on the roadsides and menaces the safety and free passage over said roads, and by continually falling into said roads, necessitates the frequent calling out of the road hands or other persons for the purpose of removing such dead and dying timber to keep the roads open and to prevent injury to persons passing thereon. In some sections and localities the entire timber and vegetation has been killed and destroyed, and in these localities by the killing of all the timber and vegetation the top soil, especially in hilly and sloping places, suffers greatly from washes as do, in consequence, the roads and highways, holes, gullies and washouts being caused thereby and the roads otherwise injured and damaged.

G. W. Hill,	T. L. Talley,
T. T. Fain,	W. F. Thomas,
Sam McKinney,	G. W. Kellar,
J. J. McKinney,	J. A. McKiney,
Thos. F. Mathews,	J. B. Yother,
Arthur Miolin,	C. R. Russell,
Samuel Higdon,	J. E. Yother,
Leonard Higdon,	J. H. Hayes,
N. M. Green,	B. F. Burk,
Benjamin M. Tilley,	W. W. Underwood,
A. C. Styles,	John R. Ballew, Jr.
I. B. Styles,	Stephen Dilbeck,
R. L. Curtis,	A. J. Bracken,

J. M. Hall,
T. G. Hall,
B. C. Arp,
W. E. Percy,
A. W. Green,
J. L. Godfrey,
A. B. Bennett,
Jackson Patterson,
G. J. Cochran,
T. H. Noel,
A. F. Watters,
Miligan Goss,
J. A. Jones,
W. D. Mull,
G. M. Oneal,
J. G. Sosebee,
T. L. Davis,
G. W. Foster,
W. A. Vestel,
A. T. Glazner,
J. M. Watters,
I. W. Queen,
J. D. Patterson,
J. S. Sosebee,
G. W. Sosebee,
Luthur Sosebee,
G. W. A. Lanning,
J. H. Vestel,
H. A. Vestel,
J. S. Winchester,
J. F. Thomas,
James R. McKinney, P. M.
Charles R. Parks,
Reno Carroll,
Thomas Hayes,
J. N. Stepp,
James Godfrey,
J. D. Underwood,
Luthur Stepp.

Sworn to and snbscribed to before me this January 13th, 1906.

THOS. A. BROWN,
Notary Public, Fannin County, Ga.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,

County of Fannin.

Personally appeared the hereinafter subscribed parties, who being duly sworn in the above styled and numbered cause, depose and say as follows: Each deponent is a resident citizen and landowner or farmer in said county and State, said lands being within the locality affected by the sulphur fumes from the copper plants situated in Polk county, Tennessee. During the past two or three years great quantities of timber have been killed within the locality in which deponents reside, and many crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and often utterly ruined. The sulphur fumes generated by the defendant copper plants just across the Tennessee State line in Polk county are frequently in said vicinity in which these deponents reside. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of haze or

vapor. The death of the timber and the general ruin of the crops, orchards and gardens have occurred only since the fumes from said copper plants and works made their appearance in the locality wherein deponents reside, and the destruction of timber and vegetation can be attributed to no other source. If the fumes are permitted to flow over the locality in which deponents reside, laden as they are with great quantities of poisonous sulphur, much valuable property will be practically made worthless. Already some farms have been abandoned on this account, and if said fumes are not stopped before the spring planting this year, numbers of the farmers within the State of Georgia, and especially in this county, will be forced to let the farms run wild, as the same can not be made productive so long as they are subjected to the poisonous gases of the copper companies.

Deponents have frequently seen instances of crops on lands and gardens or vegetables killed in a single night or day. The sulphur fumes would on such occasions seem to suddenly come down on to the earth and cling to it, the fumes being at these times noticeably strong, and soon, or at least within a few hours, the vegetation growing on said lands and gardens is seen to wither and become blighted and, although in summer, the same would appear as though it had been severely frost-bitten.

W. P. Davenport,
H. Davenport,
G. M. Richard,
C. D. Davenport,
A. M. Brackett,
M. A. Brackett,
D. Y. Nichols,
S. G. R. Allen,
Thos. Cook,
his
David X Dickey,
mark.

J. W. Hickey,
E. G. Grantham,
R. M. Bryan,
P. M. Mashburn,
C. G. Dillingham,
H. E. Wilson,
B. M. Wise,
B. D. Roberts,
his
Wm. X Bailey,
mark.
H. B. Thomas,

R. H. Abercrombie,
T. L. Ray,
M. A. Hill,
Joseph Green,
Larkin German,
his
Mack X Dobson,
mark.
A. H. Morris,
J. J. Cordell,
E. L. Prince, M.D.,
J. B. Ross,
G. A. Rhodes,
W. T. S. Dickey,
his
P. L. X Hutterson,
mark.
E. L. McAlister,
W. J. Witt,
C. L. Owenby,
A. G. Roberson,
W. T. Mull,
T. W. Davis,
H. M. Ellis,
W. J. Hayes,
W. M. Ledford,
M. J. Barnes,
J. J. Todd,
B. F. Kincaid,
J. W. Wishon,
his
Burton X Wilson,
mark.
J. C. Dillard,
D. Whiteside,
his
J. T. X Green,
mark.
Johnson Wilson,
J. W. Chapman,
L. C. Chapman,
M. T. Buchanan,
his
Arthur X Henson,
mark.
W. I. Lewis.

Sworn to and subscribed to before me, this the 6th day of January, 1906.

THOS. A. BROWN,
Notary Public, Fannin County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
County of Fannin.

Personally appeared the undersigned and hereinafter subscribed parties, who being duly sworn in relation to the above styled and numbered cause, depose and say that each of us are citizens and residents of said county and State, and that during the past two or three years great quantities of timber have been killed within the locality in which deponents reside, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the defendant copper companies' plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of haze and vapor.

The death of the timber and the general ruin of crops, orchards and gardens have occurred only since the fumes from

the copper-works made their appearance in the locality wherein deponents reside, and can be attributed to no other cause than the deadly fumes and gases generated by these copper plants.

T. N. Thomas,	G. A. Curtis,
R. C. Miller,	W. A. Wilson,
Hix Caster,	J. E. Findley,
Wm. M. Wilson,	Jno. A. Wilson,
W. A. Boling,	his
J. R. Willis,	William X Perice,
R. S. Odom,	mark.
F. C. Willis,	T. N. Willis.

Sworn to and subscribed before me, this December 27, 1905.

THOS. A. BROWN,
Notary Public, Fannin County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff.

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
County of Fannin.

Personally appeared the undersigned and hereinafter sub-

scribed parties, who being duly sworn in relation to the above styled and numbered cause, depose and say that each of us are citizen and residents of said county and State, and that during the past two or three years great quantities of timber have been killed within the locality in which deponents reside, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the defendant copper companies' plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of haze and vapor.

The death of the timber and the general ruin of crops, orchards and gardens have occurred only since the fumes from the copper works made their appearance in the locality wherein deponents reside, and can be attributed to no other cause than the deadly fumes and gases generated by these copper plants.

W. G. Owenby,	Edgar W. Butt,
C. M. Butt,	A. P. Johnson,
W. D. Cotter,	H. Arp,
M. A. McBeger,	T. A. Terrell,
W. H. Wilson,	W. M. Allen,
J. A. Tipton,	E. W. Riverside,
J. A. Jones,	W. W. Findley.

Sworn to and subscribed before me, this December 28, 1905.

THOS. A. BROWN,

Notary Public, Fannin County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
County of Fannin.

Personally appeared the undersigned and hereinafter subscribed parties, who being duly sworn in relation to the above styled and numbered cause, depose and say that each of us are citizen and residents of said county and State, and that during the past two or three years great quantities of timber have been killed within the locality in which deponents reside, crops and orchards have failed, notwithstanding weather conditions have been favorable, and gardens have been greatly injured and frequently ruined.

The sulphur fumes generated by the defendant copper companies' plants at and near Ducktown, Tennessee, are frequently noticeable in said vicinity. Not only is the presence of said fumes distinguishable by their unpleasant odor, but often to the eye, the smoke and fumes having the appearance of haze and vapor.

The death of the timber and the general ruin of crops, orchards and gardens have occurred only since the fumes from

the copper works made their appearance in the locality wherein deponents reside, and can be attributed to no other cause than the deadly fumes and gases generated by these copper plants.

Wade Allen,	John F. McNelley,
James P. Aaron,	his
A. F. Christopher,	J. M. X Davis,
J. M. Ledford,	mark.
John Baugh,	Will R. McNelly,
M. Farmer,	D. M. Fisher,
John Davis,	John Ray,
his	W. S. Hunter,
J. A. X Kaylor,	A. J. Sosebie.
mark.	H. G. Dickey,

Sworn to and subscribed before me, this December 27, 1905.

THOS. A. BROWN,
Notary Public, Fannin County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Towns County.

Personally appeared the undersigned, who being sworn in

the above stated case, each deposes and says as follows: He lives in the above stated county and in the section and district set forth opposite his name. He has resided in said county for the number of years which is likewise set opposite his name. Each of deponents is a property owner in said county, and each is engaged in the business set opposite his name.

Each of deponents is familiar with the location of defendant's furnaces, and has frequently observed the sulphur fumes or vapor emitted from said furnaces.

These fumes are of a somewhat whitish or grayish color, sometimes resembling a haze or mist. These fumes or mist have an exceedingly unpleasant odor, which is marked both in extent and character.

On days when the atmosphere is heavy and the wind is blowing in the direction from the premises of defendants, these fumes appear to have considerable cohesive qualities, and float in the air great distances. Frequently these fumes, after drifting through the air, having the general appearance of a cloud, will settle towards the earth, coming in contact with the trees and smaller vegetation.

Further, that each of deponents has at various times smelled the sulphur fumes in the air, and to the knowledge of each of deponents there is not in any section of Towns county any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does or could, produce either such haze, vapor or odor.

Each of deponents has, by reason of his residence and to the particular occupation in which he is now engaged, become familiar with the physical situation and characteristics of the larger part of said county. He is acquainted with the soil, and the character thereof; the streams, the timber, the various species of trees which prevail in said forests, the general value of the land for agricultural and other purposes, and the general market value of the trees.

The timber, consisting of white pine, hickory, white oak, chestnut, poplar and a large number of other varieties, is one

of the natural resources of the county and, either standing or cut, possess a ready market.

There has been no unnatural change in physical conditions; no marked or noticeable climatic occurrences have taken place. The weather has neither been unnaturally hot or unnaturally cold, and there has been no unusual drought or excessive rainfall during the past few years.

Each of deponents has been ordinarily familiar with the usual insects and bugs which have been found for many years in his respective district, and he has not within the past two or three years noticed or observed anything unusual either in number or variety of this form of life.

NAME	YEARS OF RESIDENCE	DISTRICT	SECTION	OCCUPATION
H. C. Kerby	40	990	1	Farming.
O. C. Wyly	22	990	1	Merchant and farmer.
J. T. Kimsey	62	990	1	Farmer.
J. W. Hyatt	26	17	1	Farmer.
J. N. Winchester	31	17	1	Farmer.
J. Y. Cathey	49	17	1	Farmer.
C. C. Alston	49	17	1	Farmer.
E. H. Kimsey	49	17	1	Farmer.
T. H. Garrett	49	17	1	Farmer.
E. M. Sellers	38	18	1	Farmer.
T. L. Sims	46	18	1	Farmer.
T. H. Wood	35	18	1	Farmer.
J. W. Foster	53	18	1	Farmer.
J. D. Reed	25	18	1	Farmer.
Jesse M. Rice	18	18	1	Farming.
J. L. Chastine	37	17	1	Farming.
W. I. T. Ramey	29	17	1	Farmer.
J. C. Penland	32	17	1	Farmer.
J. M. Welch	40	17	1	Merchant.
John S. Kimsey	39	17	1	Farmer.
J. T. Nichols	48	17	1	Farmer.
A. T. Silvey	18	17	1	Farmer.
J. J. Wood	58	17	1	Farmer.
W. L. Hooper	20	18	1	Farmer.

Subscribed and sworn to before me, this 27th day of March, 1906.

JOHN H. DAVIS,
N. P., Towns county, Ga.

Commission expires on March 26, 1907.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
Towns County.

Personally appeared the undersigned, who, being sworn in the above stated case, each deposes and says as follows: He lives in the above stated county and in the section and district set forth opposite his name. He has resided in said county for the number of years, which is likewise set opposite his name. Each of deponents is a property owner in said county, and each is engaged in the business set opposite his name.

Each of the deponents is familiar with the location of defendant's furnaces and has frequently observed the sulphur fumes or vapor emitted from said furnaces.

These fumes are of a somewhat whitish or grayish color, sometimes resembling a haze or mist. These fumes or mist have an exceedingly unpleasant odor, which is marked both in extent and character.

On days when the atmosphere is heavy and the wind is blowing in the direction from the premises of defendants, these fumes appear to have considerable cohesive qualities and float

in the air great distances. Frequently these fumes after drifting through the air, having the general appearance of a cloud, will settle towards the earth, coming in contact with the trees and smaller vegetation.

Each of deponents has frequently, while traveling through Union county, observed the sulphur fumes floating in the air, and have also at times known of its presence in that county by the strong and disagreeable odor. Further, that each of deponents, while in Towns county, has at various times smelled the sulphur fumes in the air, and to the knowledge of each of deponents there is not in any section of Towns or Union counties any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could, produce either such haze, vapor or odor.

Each of deponents has, by reason of his residence and to the particular occupation in which he is now engaged, become familiar with the physical situation and characteristics of the larger part of said county. He is acquainted with the soil, the streams, the timber, the various species of trees which prevail in said forests, the general value of the land for agricultural and other purposes, and the general market value of the trees.

The timber, consisting of white pine, hickory, white oak, chestnut, poplar and a large number of other varieties, is one of the natural resources of the county, and either standing or cut possess a ready market.

That a few years ago the timber in the eastern part of Union county was in a healthy and vigorous condition, containing only the ordinary and natural per cent. of dead timber, such as trees which had died from old age, from being girdled, burned or struck by lightning. Since these fumes have been emitted by the defendant companies a marked difference has occurred in the character of said timber. The per cent. of said timber has greatly increased.

That each of deponents has observed, while traveling to Ducktown, the nearer you approach that point the more unhealthy and sickly the vegetation becomes, and that it is the

opinion of each of deponents that the territory containing the unhealthy and sickly looking trees is gradually extending in the direction of Towns county. Deponents do not know of any other source from which the results indicated could spring than that of the fumes or vapor above mentioned.

There has been no unnatural change in physical conditions; no marked or noticeable climatic occurrences have taken place. The weather has neither been unnaturally hot or unnaturally cold, and there has been no unusual drought or excessive rainfall during the time indicated.

Each of deponents has been ordinarily familiar with the usual insects and bugs, which have been found for many years in his respective district, and he has not within the past two or three years noticed or observed anything unusual, either in number or variety of this form of life.

NAME	YEARS OF RESIDENCE	DISTRICT	SECTION	OCCUPATION
J. B. Johnson.....	34	990	1	U. S. D. M.
Geo. W. Gibson.....	40	990	1	Saw-milling.
J. P. Burong	20	1264	1	Farmer.

Subscribed and sworn to before me, this 27th day of March, 1906.

Commission expires on March 26, 1907.

JOHN H. DAVIS,
Notary Public, Towns county, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

GEORGIA, Fannin County.

Personally appeared before the undersigned, a notary public in and for said county and State, J. J. Cordell, who, after being duly sworn, deposes and says in relation to the above styled and numbered case, that he is personally acquainted with J. E. Lindsay, J. T. Jones, J. M. Parker, W. A. Ledford, H. Roberts, L. E. Richard, C. H. Whites, John White, W. A. Calhoun, Gus Smith, T. B. Turner, L. C. Turner, W. W. Hilbeck, J. E. Wilson, M. D. Richards, H. Richards, J. W. King, W. M. Falls, C. G. Smith, C. J. Watson, J. B. Ricketts, W. McFarland, G. Standridge, F. E. Garner, G. L. Baker, L. C. Williams, W. A. Smith, A. H. Shope, W. E. Bartley, R. L. Turner, F. E. Hickey, S. M. Falls, J. L. Williams, J. E. Newton, F. A. Bailey, James Chastain, S. O. Sutton, O. P. Tillery, W. F. Ellis, L. T. Jones, Bur. Dooley, N. C. Garren, R. M. Kaylor, H. R. Todd, A. S. Jones, G. W. Patterson, Joe Dilbeck and W. A. Williams, the persons whose names are signed to a certain affidavit made before G. G. Hyatt, notary public for Polk county Tennessee, on the 11th day of November, 1905, and by 75 other persons,

and as the said affidavit appears on pages 114, 115, 116 and 117 of the published argument, brief and exhibits of defendant Tennessee Copper Company on application of plaintiff for preliminary restraining order, filed by Howard Cornick and John H. Frantz, attorneys for Tennessee Copper Company, and Martin H. Vogel, of counsel, in said above styled and numbered case—and that each of said above named persons were at the time said affidavit was made in the employ of the Tennessee Copper Company, one of the defendants in the said above styled and numbered case.

his
J. J. X CORDELL.
mark.

Sworn to and subscribed to before me, this January 10, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

GEORGIA, Fannin County.

Personally appeared before the undersigned, a notary public

in and for the said county and State, William J. Witt, who, after being duly sworn, deposes and says on oath in relation to the above named and styled case, that he is a citizen and landowner of said county, and for a number of years was in the employ of the Tennessee Copper Company, one of the defendants in the above stated case, as one of its foremen, and that he has had fine opportunity to know the persons employed by said company, as well as the Ducktown Sulphur, Copper and Iron Company (Limited), the other defendant. Affiant says that he has examined the affidavits filed by 125 persons, who claim to be residents of Fannin county, Georgia, and by 174 other persons claiming to be citizens and residents of Georgia, both made before G. G. Hyatt, Notary Public, Polk county, Tennessee, on the 11th day of November, 1905, as they appear on pages 114, 115, 116, 117, 125, 126, 127, 128 and 129 of the published "Argument, Brief and Exhibits of Defendant Tennessee Copper Company on Application of Plaintiff for Preliminary Restraining Order," filed by Howard Cornick and John H. Frantz, attorneys for Tennessee Copper Company, and Martin H. Vogel, of counsel.

Deponent was a foreman in the employment of the Tennessee Copper Company from about June 10, 1901, until about April 10, 1904.

During this period of time deponent was constantly and daily engaged within the scope of his business. The position indicated brought him into contact with substantially every employee of said Tennessee Copper Company. He became personally acquainted with them. Of the 299 persons mentioned in the foregoing affidavits 154 are now, or have been until recently at various times in the service of said Tennessee Copper Company, or of the Ducktown Sulphur, Copper and Iron Company. The furnaces of the two companies are but a few miles apart, and intercourse between the employees of the two companies was frequent. Not only was deponent familiar with the employees of the company by whom he was engaged, but

he likewise became personally acquainted with nearly all of the employees of the other company.

The persons making said affidavits, who were personally known to this deponent to be in the service of one or the other of the companies, are as follows: E. P. Galloway, W. D. Odary, J. E. Lindsay, J. T. Johnson, J. M. Parker, H. L. Henson, J. H. Campbell, R. B. Bennett, W. A. Ledford, H. P. Bennett, H. Roberts, L. E. Richards, C. H. Whites, John White, John Roberts, H. T. Weese, W. A. Calhoun, Gus Smith, H. Smith, T. B. Turner, L. C. Turner, W. W. Hilbeck, J. E. Wilson, M. D. Richards, A. T. Paden (who lives in Tenn.), J. W. King, O. G. Paden, C. C. Smith, O. M. Bulridge, C. J. Watson, W. McFarland, E. Block, W. S. Callahan, M. L. Burn, G. L. Baker, W. H. Robinson, L. B. Hughes, B. C. Wright, T. A. Armtreck, W. T. Stiles, J. C. Qeen, J. B. Troutham, L. C. Williams, W. G. Davis, A. H. Shope, J. D. Thomason, W. E. Bartley, R. L. Turner, F. E. Hickey, L. M. Tanner, J. F. Brown, L. F. Weeks, H. D. Pence, S. M. Falls, I. L. Williams, J. E. Guy, J. E. Newton, F. A. Bailey, F. M. Cagle, M. H. Cole, E. M. Flowers, Jas. Chastain, O. P. Tilery, W. F. Ellis, L. T. Jones, B. B. Bearden, Bur. Dooly, N. C. Garren, W. A. Kell, W. C. Skelton, R. B. Stuart, J. J. Kiker, R. H. Kaylor, A. S. Jones, W. A. Patterson, C. W. Patterson, John Hayes, H. Hayes, T. D. Owen, Joe Dilbeck, W. A. Williams, W. H. Ross, Avery A. Brown, M. D. Cole, J. D. Mason, W. B. Mayson, J. D. Carroll, E. J. Hyatt, J. M. Standridge, T. M. King, W. M. Turner, C. C. Collins, E. J. King, B. M. Holland, Geo. P. Fortner, P. F. Dean, R. C. Freeman, G. B. Standridge, M. A. Cole, P. C. Bailey, H. W. Ross, J. A. Tarpley, J. Lowery, J. M. Arp, W. M. Parr, W. W. Batts, I. O. Sisson, John Lowery, P. O. German, L. A. German, G. W. Carter, H. T. Branton, A. B. Henry, T. D. Arp, G. M. Bryant, R. M. Queen, Joe Green, J. W. Standley, J. M. Edwards, James Edwards, W. T. Elrod, W. H. Qeenry, H. F. Huffman, T. G. Qeen, A. S. Holden, L. M. Chastain, O. L. Tarpley, R. B. Turner, F. A. Tipton, E. A. Kiker, J. W. Lance, M. Elrod,

W. W. Fain, W. M. Curtis, A. G. Anderson, N. L. Suits, W. A. Batts, W. M. Grizzle, J .W. Edwards, C. W. Hensley, E. E. Abernathey, A. S. Roach, L. F. Christie, W. M. Stephenson, J. M. Cooper, G. W. Gaddis, G. W. Stewman, J. C. Ramy, J. P. Ramy, C. C. Abernathey, John Roach and A. B. Davis. Affiant knows that many persons who bore and were known by the surnames of persons whose names are signed to said affidavits were and are in the employ of defendants, but he does not know them by the initials which are so signed to the said affidavits.

Deponent says that not only was he personally familiar and acquainted with the employees of said company, but in pursuance of his duties had become acquainted with a great many persons collaterally connected with the defendants, such as teamsters, contractors, persons who hauled for said company and otherwise had business relationships with them.

Out of the foregoing affidavits the following maker thereof, to wit, Davis Merrell, has been engaged in hauling for said companies, and has frequently had business relationships with the said company, which relationships brought him in close touch with said company.

Deponent knows of none of said persons making said affidavits whose vocation is that of farming, lumbering, or stock-raising in the State of Georgia. Each and all of said persons were either employees of said company or engaged in doing business with said company, and who to a very large extent, if not entirely, are dependent for their livelihood upon the conduct of the business of said company.

WILLIAM J. WITT.

Subscribed and sworn to before me, this January 27, 1906.

THOS. A. BROWN,

Notary Public, Fannin county, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

GEORGIA, Fannin County.

Personally appeared before me, Thos. A. Brown, a notary public in and for said county and State, an officer of said State duly authorized to administer oaths, Walter O. Davenport, who, after being duly sworn, deposes and says in reference to the above styled and numbered case as follows: Deponent is a merchant and resident of said county and State, and has been doing business at his residence at Hemp, a postoffice in said county, about four and one-half miles from Morganton, Ga., and about eighteen miles from Isabella and McCay, Tennessee, where the furnaces of the above stated defendants are located. During the summer and fall of the last three or four years he has observed the fumes and gases generated at the copper furnaces of said defendants, located as aforesaid, in his community and at his residence and store at Hemp, Ga. Deponent knows that said fumes seen by him as aforesaid were generated by the defendants and at their furnaces, because he is familiar with their peculiar odor and character, and for the further

reason there are no other manufacturing plants or enterprises within many miles of his residence and store or the location of the furnaces of said defendants which generate and throw off into the atmosphere any such fumes and gases.

Deponent further says that he knows, and is personally acquainted with, Capt. C. L. Hensley, who formerly resided in Fannin county for several years near the store and residence of deponent, and for a part of the time in the same house with deponent. Capt. C. L. Hensley is the same person who made an affidavit in behalf of the defendants in the above styled and numbered case at Knoxville, Knox county, Tennessee, in which he stated that he had not seen or observed any fumes from said copper plants of defendants in Fannin county, or words to this effect. Deponent says that while Capt. Hensley was living in the same house with deponent at Hemp, Fannin county, Georgia, we had frequent talks about the appearance of these sulphur fumes from the plants of defendants in and about the store and residence of deponent, where Capt. Hensley was then living, and about the effect said fumes and sulphur smoke was having upon timber and vegetation in the county of Fannin. It was the opinion of both of us that the fumes so observed by us came from said furnaces of defendants located as aforesaid, and that the said sulphur smoke and fumes were injuring timber and vegetation not only at our place of residence, but to even a very much greater extent in other portions of the county and nearer to Isabella and McCay, Tennessee, where said furnaces are now located.

WALTER O. DAVENPORT.

Sworn to and subscribed before me, this April 11, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
Union County.

Personally appeared before me the undersigned authority, S. Y. Jarrett, who, being first duly sworn herein, on his oath did say:

That he is a resident of Union county, State of Georgia; that he is the duly elected and qualified Ordinary of said county. That he is the legal custodian of the tax digests of the county, and that said digests show who are citizens of the county, and the amount, kind and value of the property owned by each citizen.

That he is informed the defendants in the above entitled matter heretofore filed an affidavit, dated November 11, 1905, and signed by a large number of people; which said affidavit sets forth, among other things, that the signers are residents and citizens of said county of Union, State of Georgia.

That this deponent has carefully examined both the wild and improved tax digests of said county for the year 1905, and finds that of the signers of the above mentioned affidavit the

following appear on said digests, but return no property whatever for taxation:

Chas. W. Griffies,	L. C. Chastain,
J. E. Morgan,	J. A. Thomason,
B. L. McBee,	G. D. Tanner,
J. R. Viles,	L. F. Turner,
R. N. Donaldson,	J. T. Dyre,
T. C. Helton,	J. G. Butt,
M. Voiles,	W. E. Dean,
J. C. Turner,	A. Jordan,
H. A. Holbrooke,	Z. V. Rogers.

Further, that of the signers of said affidavit the following do not appear on said tax digests of said county:

W. A. Turner,	J. T. Cealley,
J. A. Hallbrook,	M. C. Helton,
W. P. Balher,	G. L. Palmer,
J. N. Nix,	W. A. Jackson,
E. W. Chapman,	I. L. Patterson,
M. G. Cobb,	J. W. Hilton,
W. P. Seagroves,	J. P. Cewsley,
T. S. Donaldson,	J. W. Galloway,
J. M. Nix,	A. L. Teague,
E. Woody,	W. T. Maffey,
M. L. Odom,	Beerly Cobb.

Further, that of the signers of said affidavit the following appear on said tax digests and return for taxation the amount of property set opposite their names:

G. J. Jackson,	$ 36.00	A. P. Kincaid,	$ 5.00
J. O. Rider,	175.00	W. J. Rider,	238.00
W. F. Donaldson,	115.00	T. M. Gillespie,	684.00
J. C. Fortenbery,	130.00		

S. Y. JARRETT,
Ordinary, Union county, Georgia.

Subscribed and sworn to before me, this 31st day of March, 1906.

W. E. CANDLER, N. P.,
Union county, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA,
County of Gilmer.

Personally appeared before the undersigned, Dr. St. Joseph B. Graham, who, first being duly sworn in the above styled and numbered cause, deposes and says:

That he is forty-one years of age, an active practicing physician, located at Savannah, Georgia. That he is a graduate of the Medical Department of the University of Louisville, Kentucky. That prior to this he was for three years first assistant to the late Thomas William Tobin, professor of chemistry at the Louisville Polytechnic Society, Louisville, Kentucky; that he is a graduate of New York Polyclinic; later a post-graduate in medicine and higher branches of allied science of the University of Heidelberg, Germany. Also studied i. e Pasteur Institute, Paris, France; also had three years' experience as assistant physician at Blackwell's Island, New York; also served for three years as chief quarantine officer in the service of the United States Government, and the city of Savannah, at

port of Savannah, Georgia. Was also editor of the Georgia Journal of Medicine and Surgery.

Deponent is, by means of his experience and research, an expert on the subject of sulphur dioxid and its effects on vegetation, having especially handled and used this gas continuously as a method of disinfecting infected and suspected ships and cargoes, pursuant to my duties as quarantine officer, above referred to. Deponent is thoroughly familiar with the manufacture, chemical qualities, appearance, odor and chemical properties of this gas in its various strengths, and its direct effect on organic life.

Deponent has repeatedly observed this gas free in the atmosphere at Ellijay, Georgia, in very large quantities. This was particularly noticeable on the night of the 17th of March, just past. On which occasion the atmosphere was heavy and damp, with direct northerly wind. This sulphur dioxid was apparent in sufficient quantities, on the several occasions above referred to, to undoubtedly produce death and consequent decay of timber and vegetation.

Deponent knows that sulphur dioxid present in the quantities observed by him at Ellijay, Georgia, and vicinity, is bound to produce destruction of timber and vegetation, and this, afterwards naturally molding and decaying, will pollute and contaminate the streams, springs and other water-supply sources, and is no doubt the cause of many of the epidemics of typhoid and other fevers that this otherwise healthy mountain country has been subject to in the recent past. Deponent conducts a private laboratory in Savannah, Georgia, for the examination and analysis of waters and other suspected material from sources suspected of producing typhoid or other intestinal and infectious diseases, and in consequence is thoroughly familiar with same.

If the present fumes be doubled the damage to North Georgia will be increased in proportionate ratio. It is deponent's opinion that if this sulphur dioxid is liberated from a stack 325 feet high that it would only be carried and distributed further

into the territory of this State, should the winds be this way. At the same temperature sulphur dioxid is heavier than air, and same coming in contact with the watery vapor in the air produces by a chemical action H_2SO_3, or sulphurous acid gas, which is 2.21 times heavier than atmospheric air. Drifted by the prevailing winds it eventually falls to the earth by its greater weight, and covering vegetation as by a blanket, thus destroying its vitality. Sending these fumes higher into the air can in no manner prevent this taking place, and the higher the fumes are first sent the further they will drift away from the furnaces if the air be stirring, and will thus be further distributed into Georgia territory.

ST. J. B. GRAHAM, M.D.

Sworn to and subscribed before me, this the 26th day of March, 1906.

W. T. PIRKETT,
Notary Public, Gilmer county, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
County of Fulton.

Personally appeared C. H. Arnold, who, first being sworn in the above styled and numbered cause, deposes and says:

That he owns 1,200 acres of land in Gilmer county, Georgia, situated about five or six miles northeast of Ellijay, Ga.

The defendant further states that he has about twenty thousand apple and peach trees on the above land; and he also states that 300 to 400 acres of the land is cleared, a large portion of which is very fertile, yielding good crops every year, and has grown as high as 636 bushels of Irish potatoes per acre.

The defendant further states that a large portion of the timber on said land is dying each year, and he believes the cause is the smoke from the Ducktown furnace, which is located in Tennessee, and unless said cause is eliminated the timber will soon be destroyed. I believe my apple and peach trees will die.

(Seal) C. H. ARNOLD.

Subscribed and sworn to before me, this 7th day of April, 1906.

EDW. T. TURNIPSEED,
Notary Public.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
County of Campbell.

Personally appeared W. H. Hill, who, first being sworn in the above styled and numbered cause, deposes and says:

That he owns about 1,200 acres of land about two miles northeast of Ellijay, Gilmer county, Ga., and has six or seven thousand apple and peach trees on the above land.

He further states that he has about 150 to 200 acres of cleared land, which is cultivated and yields satisfactory crops every year.

He further states that the timber on the said land is dying rapidly, and he believes the cause is the smoke from the Ducktown furnace, which is located in Tennessee, and unless said cause is eliminated the timber will soon be destroyed.

(Seal) W. H. HILL.

Subscribed and sworn to before me, this 7th day of April, 1906.

EDW. T. TURNIPSEED,
Notary Public.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF MONTANA,
County of Missoula.

Comes W. D. Harkins, who, being duly sworn in the above outlined cause, on oath says:

He is a chemist by occupation, and is now and for the past six years has occupied the chair of chemistry at the University of Montana. In his capacity as chemist he, during the years 1902, 1903, 1904, 1905 and 1906, made an examination of the Washoe Smelter at Anaconda, Montana, and also visited other smelters at Salt Lake, Utah; Butte, Montana; Great Falls, Montana, and Keswick, California, to determine the effects of low and high stacks upon the distribution of arsenic, copper, lead, sulphur dioxide, sulphuric acid and other substances over the surrounding regions, these substances being the products of the smelting of sulphides of copper.

The investigation was made particularly with reference to the effects of high and low stacks at the Washoe Smelter. In this smelter the stacks formerly in use, four in number, and each about two hundred and twenty feet in height, were re-

placed in 1903 by one large flue and stack. The new stack is 300 feet in height, but the flue gives an added vertical height of about four hundred feet. The smoke is now discharged at a point about five hundred feet higher than the previous points of discharge. The point of discharge is now about one thousand feet above the floor of the valley, the smelter itself being located upon a hill.

The general result of this investigation, and of my other observations, shows that the general effect resulting from the increase in the height of a stack is to decrease the damage to the plants in the locality adjacent to the stack, and to spread the damage over a greater area, thus increasing the damage over an area lying at a greater distance from the foot of the stack.

The change from heap roasting to the use of a stack to carry off the smoke would be a change in the same direction as the change from a low stack to a high one, and would tend to decrease the injurious effects near the plant, and to increase the damage at more remote points.

The gas escaping from such stacks has a greater density than air, due to the presence of sulphur dioxide, sulphuric acid, carbon dioxide, solid matter, etc., and even the watery vapor, which in the stack tends to make the gases lighter, may, on condensation by cooling after leaving the stack, also increase the specific gravity of the smoke. The smoke, then, on coming to the temperature of the air, becomes heavier than the air, and, therefore, the smoke stream tends to fall again, and to strike the ground, often at a considerable distance from the foot of the stack; sometimes at the very foot of the stack. Gases of the density of sulphur dioxide diffuse into air with extreme slowness, so that the only chance for the dilution of the smoke, and thereby of the sulphur dioxide, is the mixing of the gas as a whole, due to winds or to friction between the smoke and the surrounding air. On this account the gas escaping from a chimney will often carry in a concentrated form to a greater

distance as a "smoke stream" than it would if discharged from several points.

A high stack also increases the danger, in a hilly country, of the smoke dropping from a height to which it has risen over a hill and into the country beyond, thus injuring a region which might be entirely protected by the hill from damage by the smoke from a low stack or heap.

The answer to a question as to whether the change from a low stack to a high one would be beneficial on the whole to the surrounding country would be impossible without a study of the local conditions. The results of such a change would depend upon the character of the surrounding country; the relative value of property near the smelter and farther away from it, the extent of the region already damaged, the topography of the surrounding country, the prevailing winds, the seasons during which they blow, and still other factors.

W. D. HARKINS.

Sworn to and subscribed before me, this 13th day of April, 1906.

JOHN M. EVANS,
Notary Public in and for Missoula county, Montana.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
County of Gilmer.

Personally appeared before me, the undersigned Notary Public in and for Gilmer county, State of Georgia, D. A. Jones, who, first being duly sworn, deposes and says: That he is a duly qualified notary public of Gilmer county, Georgia. That he has carefully examined the affidavit filed by seventeen persons who swear they are citizens of Gilmer county, Georgia, before one G. G. Hyatt, notary public, Polk county, Tenn., which affidavit is printed in full in and appears on page 1 of the published "Argument, Brief and Exhibits of the Defendant, Tennessee Copper Co., on Application of Plaintiff for Preliminary Restraining Order." This affiant says that he made a full, careful, exhaustive and complete examination of the Tax Digest of Gilmer county for the year 1905 as now on file in the office of the Ordinary of said county, and that there he could only find four of the said persons appearing thereon as taxpayers, viz., J. A. Fowler, who pays on household goods $20.00; J. E. Cochran, who pays on lands $20.00 and personal

property $93.00; John Wright, who pays on land $100.00 and personal property $28.00, and Frank L. Jones, who is credited with $1.00 poll tax. Affiant further says that he is reliably informed that the said G. G. Hyatt, who purports to have signed said affidavit of notary public, is in fact attorney-at-law for one, if not both, defendant companies.

D. A. JONES.

Sworn to and subscribed before me, this January 12, 1906.

C. S. ALLEN, N. P.,
Notary Public for Gilmer county, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

GEORGIA, Gilmer County.

Personally appeared before the undersigned, W. F. Hampton, who, first being duly sworn in the above styled case, deposes and says:

That he is a regular ordained minister of the Georgia Conference of the M. E. Church. That he is now an active pastor in charge of the Epworth and Blue Ridge circuits of Fannin

county, Georgia, which circuits he has been in charge of now going on two years. During all this time the duties of his position carry him over and through a large part of Fannin county, and that he is brought directly in contact with farmers, lumbermen and the general interests of this community. Deponent has been acquainted with this section intimately through his association with Epworth College and his pastoral duties now going on five years.

Deponent knows that recently all vegetation throughout this district shows, more or less, the evil effects of some very severe pestilence or blight, that the timber, fruit trees and crops are all more or less affected, and it is the deponent's belief that all of this damage has been caused solely and entirely by the fumes generated by the copper plants located across the line in Tennessee. The deponent has often seen these fumes in the neighborhood, as they are easily distinguishable by their color and odor, and are always more or less present and noticeable in this district whenever the wind happens to be from the direction of defendants' furnaces and smelters. Deponent is well acquainted with these fumes; has often been to the plants of the defendants and come immediately in contact with them. They have a very peculiar odor, and when once one becomes well acquainted with them there is no possible chance of ever getting them confused with any other gases, fumes or odors anywhere in this mountain country, as there is no other such fumes or gases being produced, or that could be produced, in any part of this country anything like them.

Deponent has often heard his parishioners complain bitterly of the presence of these fumes, and complain of the loss of their crops, fruit and timber, which would often be accomplished by them in a single night. Deponent knows of his own personal knowledge where these fumes have settled down and killed beans, peas, tomatoes and potatoes in a single night. Deponent knows of instances where large, thrifty, and to every outside appearance, healthy forest trees have had their leaves blistered, seared and killed by these fumes and these leaves to

have been shed by said trees in midsummer, and the trees to put out a second crop of leaves the same season, to be again killed by the fumes, which would usually result in the death of the trees, as when thus affected they would rarely put out leaves again.

Deponent knows that these fumes causing the destruction of the timber have made the roads dangerous for travel in many places on account of the dead timber falling across said roads and endangering the public using them. Deponent further states that these fumes, as they are now spread over this country, are acting as a great hindrance, blight and damper on all agriculture, farming, fruit raising and other allied interests in every line and are holding back, retarding and ruining the whole of this section, and will so continue to do, and the damage will increase as long as these fumes are liberated as they now are by said copper companies.

W. F. HAMPTON.

Sworn to and subscribed before me, this the 19th day of March, 1906.

W. T. PICKETT,
Notary Public, Gilmer County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

GEORGIA, Fannin County.

Personally appeared before me the undersigned, a notary public in and for the county of Fannin, State of Georgia, D. A. Jones, who, being first duly sworn, deposes and says that he has examined the affidavit filed by one hundred and twenty-five persons before G. G. Hyatt, a notary public for Polk county, Tennessee, on the 11th day of November, 1905, which affidavit is printed in full in, and appears on page 114 of the published "Argument, Brief and Exhibits of Defendant, Tennessee Copper Company, on Application of Plaintiff for Preliminary Restraining Order," filed by Howard Cornick, John H. Frantz, attorneys for Tennessee Copper Company, and Martin H. Vogel, of counsel, and in which said named affiants claim they "are residents and citizens of Fannin county, in the State of Georgia"; and this affiant further says that in connection with the Hon. W. A. Daves, ordinary of said county of Fannin, he made a full, careful, exhaustive and complete examination of the tax digest of Fannin county for the year 1905, now of file in the office of said ordinary for said county, and that only

the names of twenty-six of the persons who purport to have signed said affidavit appear upon said digest as taxpayers of said county for said year, the names which do appear on said digest being as follows, to wit: E. P. Galloway, H. L. Henson, J. H. Campbell, W. A. Ledford, W. A. Calhoun, J. E. Wilson, O. G. Paden, J. H. Cook, W. McFarland, W. H. Robinson, L. B. Hughes, Davis Merrell, W. G. Davis, S. M. Falls F. M. Cagle, E. M. Flowers, W. F. Ellis, W. A. Kell, W. M .Allen, A. S. Jones, John Hayes, J. D. Patterson, Jas. Harren, J. O. E. Dilbeck, J. D. Jenkins and R. L. Turner. Affiant further says that G. G. Hyatt, who purports to have signed said affidavit as a notary public is the attorney at law for one if not both defendant companies.

D. A. JONES.

Sworn to and subscribed before me, this January 10, 1906.

THOS. A. BROWN,
Notary Public for Fannin County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

GEORGIA, Fulton County.

Personally appeared before me the undersigned officer au-

thorized to administer oaths, R. H. Robb, who after being duly sworn, deposes and sayeth:

I became fully aware of the conditions about Ducktown, Tennessee, as follows: As a presiding elder in the Methodist Episcopal church, I visited Epworth, Georgia, three miles from the smelter of Tennessee Copper Company, nearly every three months for six years, beginning with April, 1897. Because of advantages offered at Epworth our people erected Epworth Seminary there at a cost of five thousand ($5,000) dollars, and there has been since added several thousand more. The purpose of the church was to bring our people there for the purpose of educating their children. During the past few years the prospects of the institution have been greatly blighted because of the damage being done by the Ducktown smoke. The destruction by smoke of timber and vegetables has prevented us from attracting our people, as they can not be induced to locate where they can not have shade and raise vegetables. For three years (1902-1905) I was a citizen there and own property there. During those years I witnessed from year to year the increasing destruction caused to farm and garden products and the wholesale (in some places) destruction of timber caused by the Ducktown smoke. During the summer of 1905 I attended several mass meetings of the farmers and others at Epworth—representing the farmers for several miles—and heard them relate in detail the damage done by the smoke to farm and garden products, fruits and timber. Some crops were wholly destroyed and others partially. Heard also the trustees of our church and school property lament the irreparable damage done to our beautiful grove, the pride of the place.

Deponent further alleges that he has read the minutes of a mass meeting held at Harper's Store, Georgia, February 3, 1906, in the interests of the copper companies, and the names attached to the same, and recognizes among them the names of several farmers (including a member of the committee on resolutions of said meeting) from around Epworth, who attended the Epworth mass meeting last summer and who in common

with others related in detail the damage done to their farm and garden products and timber by the Ducktown smoke as is shown by the minutes of Epworth mass meeting.

R. H. Robb.

Sworn to and subscribed before me, this March 17, 1906.

W. H. Harrison,
Notary Public, Fulton County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

The State of Georgia, by its Attorney-General, John C. Hart,
Plaintiff,

vs.

The Tennessee Copper Company and The Ducktown Sulphur, Copper and Iron Company (Limited),
Defendants.

} In Equity.

Georgia, Fannin County.

Personally appeared before the undersigned, a notary public in and for said county and State, William J. Witt, who, after being duly sworn, deposes and says on oath in relation to the above named and styled case, that he is a citizen and landowner of said county, and for a number of years was in the employ of the Tennessee Copper Company, one of the defendants in the above stated case, as one of its foremen, and that he has had fine opportunity to know the persons employed by said com-

pany, as well as the Ducktown Sulphur, Copper and Iron Company (Limited), the other defendant. Affiant further says that he has examined the affidavits filed by 125 persons, who claim to be residents of Fannin county, Georgia, and by 174 other persons claiming to be citizens and residents of Georgia, both made before G. G. Hyatt, notary public, Polk county, Tennessee, on the 11th day of November, 1905, as they appear on pages 114, 115, 116 and 117, and 125, 126, 127, 128 and 129 of the published "Argument, Brief and Exhibits of Defendant, Tennessee Copper Company, on Application of Plaintiff for Preliminary Restraining Order," filed by Howard Cornick and John H. Frantz, attorneys for Tennessee Copper Company, and Martin H. Vogel, of counsel, and that all of said 299 persons are in or have recently been in the employ of one or the other of said defendant companies, with the exception of a very few, and the exceptions are persons who are engaged in hauling for said companies or who own teams which are used in hauling for the said companies. Affiant further says that none of such persons are interested in farming, lumbering or stock raising in this State, the only interest such persons have is the maintenance of their daily wages as employees of these companies, except merely incidentally.

WILLIAM J. WITT.

Sworn to and subscribed to before me, this January 11, 1906.

THOS. A. BROWN,

Notary Public, Fannin County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

GEORGIA, Fannin County.

In person appeared before the undersigned, an officer of said State duly authorized to administer oaths, John V. Willson, who, being duly sworn in relation to the above styled and numbered case, deposes and says that he is a citizen and landowner in said county and State, said land consisting of 220 acres, more or less, and located on Toccoa river, four miles air line north of the city of Blue Ridge, in said county, and about six miles south of the location of the Tennessee Copper Company's plants. Before said lands were affected by the smokes and copper fumes, which have been blowing over the same for about four years, affiant in his opinion could have sold said lands for $2,000, and now since the same has been injured as hereinafter stated, he has sold the same for $1,200, said sale on account of the injuries which were being done to said farm by said fumes and deadly gases, and affiant says that he would not have taken less than $2,000 for said farm before it had been injuriously affected by said smoke.

Before said fumes made their appearance in affiants com-

munity there was sufficient timber alive and growing to support and keep up the said farm, but since said farm has been affected by said smoke and fumes most of the best timber has been killed. Since said smoke has been observed on said farm the fodder takes something like a dry rot and same does not mature, and the greater part thereof is destroyed and lost to deponent. The orchards have also been affected and rendered practically worthless. The effect of said smoke and gases have been such that said lands in productive capacity has been reduced one-fourth. The injury being done the timber, vegetation and lands is progressive, in that more injury was done by the smoke and gases last year than during any other year.

JOHN V. WILLSON.

Sworn to and subscribed to before me, this January 15, 1906.

THOS. A. BROWN,
Notary Public, Fannin County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

GEORGIA, Cherokee County.

Personally appeared before me, the undersigned, J. C. Mc-

Daniel, who first being duly sworn in the above styled and numbered case, deposes and says:

That he was for four years justice of the peace of the 1129th Georgia Militia district, and that he was located at Tate, Georgia, during this time. That he is well acquainted with the country in and around Cherokee and the counties surrounding, in which neighborhood he has lived years. That he is well acquainted with all the factories and manufacturing plants located in this section of country. This deponent further says that he has often smelled the sulphur-laden fumes throughout this territory from the copper plants located across the Georgia line in Tennessee near Ducktown. That this was particularly noticeable at Tate, Georgia, on numerous occasions, and always when the air was heavy, and usually at night, and never except when the winds were from the direction of the Ducktown furnaces. That he has often heard his neighbors speak of these fumes and complain of them. One time I particularly recall at Tate, Georgia, was one evening about seven o'clock, when Mr. Sam Tate, the president of the Georgia Marble Company and myself were together, and walked from the station at Tate to my home. On this evening these fumes were very noticeable, and I called Mr. Tate's attention to them, and he also observed them and remarked on their presence in the atmosphere. I have heard numbers of people who have lived at Ducktown, and were thoroughly familiar with these fumes in the air, identify them at Tate, and call my attention to them. There is no possible chance for me to have gotten these fumes confused with any other fumes in this mountain country, as there are none produced anywhere in this section that are anything like the Ducktown fumes. These fumes are very noticeable from their unpleasant and peculiar odor, and when once one smells them they will never forget them when brought into contact with them again.

J. C. McDaniel.

Sworn to and subscribed before me, this day, 3d of April, 1906. M. C. Roberts, C. N. P.,
Notary Public, Cherokee County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA,
County of Gilmer.

Personally appeared the hereinafter subscribed parties, who being duly sworn in the above styled and numbered cause, deposes and says:

Each deponent is a resident, citizen of said State and county, that during the past two or three years great quantities of timber have been killed within the locality within which the deponent resides and wherein he is acquainted. To the best of deponents' belief and knowledge this destruction of timber is occasioned by the sulphur fumes from the smelters and works of the copper companies operating in Polk county, Tennessee, not far from the Georgia line. The deponents have often noticed these fumes whenever the wind seemed to be in the right direction. Said fumes were distinguishable not only by their unpleasant odor, but often were visible to the naked eye, having the appearance of a haze or vapor. The death of the timber has only occurred in such great quantities since the fumes from the copper works made their appearance in the locality wherein

deponents reside. Since this heavy destruction of timber and vegetation, and within the past two years especially there has been a veritable epidemic of typhoid fever, there being many times the number of cases all throughout deponents' territory as in former years.

W. W. Holt,	W. P. Tucker,
W. M. Rogers,	R. F. Key,
A. R. Weaver,	J. B. Pless,
J. R. Scott,	J. A. Allen,
B. C. Whitener,	Lon Linsey,
W. V. Russell,	J. I. Smith.

Sworn to and subscribed before me, this 12th day of January, 1906.

D. A. JONES,
Notary Public, Gilmer County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

J. B. THOMPSON { 27 District, 2d sec., Farmer, 30 years.

GEORGIA, Murray County.

Personally appeared the undersigned, who, being duly sworn in the above stated case, says as follows:

That he lives in the above stated county and in the section and district set opposite his name. He has resided in said county for the number of years which is likewise set opposite his name.

Deponent has had a general knowledge of the public roads and highways which have been established for and are used by the public in his respective districts.

Within the past two or three years deponent has frequently observed the vapor sulphur fumes emitting from the furnaces of the defendants. These fumes are of a somewhat whitish or greyish color, sometimes resembling a sort of haze or mist. These fumes or mist have an exceedingly unpleasant odor which is marked both in extent and character.

On days when the atmosphere is heavy and the wind is blowing in a direction from the premises of defendants these fumes appear to have considerable cohesive qualities and float in the air great distances. They frequently settle towards the earth, coming in contact with the trees and smaller vegetation.

Prior to the time mentioned the timber in the district of said county in which deponent resides was healthy and in good condition. It contained only an ordinary natural per cent. of dead timber, such as trees which died from natural old age, or trees which had been girdled or burnt or struck by lightning. Since these fumes have been emitted a marked difference has occurred in the character of said timber. The per cent. of dead timber has enormously increased. Certain classes of timber have been either entirely or almost wholly exterminated, such as the hickory and chestnut oak, and other timber such as the white pine is also dying in great quantities.

There has been no unnatural change in the physical conditions; no marked or noticeable climatic occurrences have taken place. The weather has been neither unnaturally hot nor unnaturally cold. There has been no unusual drought or excessive rainfall during the time indicated.

The death of the timber mentioned has materially affected

the public highways mentioned. Trees growing on or near the boundaries of said highways which were in outwardly good condition two or three years ago have died. Many of such trees in the district mentioned and limbs from them are constantly falling on and across the highways, making the passage upon such highways more difficult, slower and more dangerous, particularly during high winds. It is more expensive to maintain said highways now than formerly for such trees and large limbs when they fall upon the highway and obstruct the same must be cut up and removed. This per cent. of increased cost in maintaining the highways has been considerable. It is continuous in character and will be for several years longer if the timber continues to be affected in the future as it is now and has been within the past two or three years.

J. B. THOMPSON.

Subscribed and sworn to before me, this 8th of March, 1906.

J. C. CHABLÉ,

Notary Public, Murray County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

D. J. ISENHOUR } 26 District, 2 sec. Murray, county, Ga.

GEORGIA, Murray County.

Personally appeared the undersigned, who, being duly sworn in the above stated case, says as follows:

That he lives in the above stated county and in the section and district set opposite his name. He has resided in said county for the number of years which is likewise set opposite his name.

Deponent has had a general knowledge of the public roads and highways which have been established for and are used by the public in his respective districts.

Within the past two or three years deponent has frequently observed the vapor sulphur fumes emitting from the furnaces of the defendants. These fumes are of a somewhat whitish or greyish color, sometimes resembling a sort of haze or mist. These fumes or mist have an exceedingly unpleasant odor which is marked both in extent and character.

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D. J. ISENHOUR.

Subscribed and sworn to before me, this 3d March, 1906.

E. L. BATES, J. P.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

R. L. HILL } 27 Dis., 2 sec., Woodsman, 5 years.

GEORGIA, Murray County.

Personally appeared the undersigned, who, being duly sworn in the above stated case, says as follows:

That he lives in the above stated county and in the section and district set opposite his name. He has resided in said county for the number of years which is likewise set opposite his name.

Deponent has had a general knowledge of the public roads and highways which have been established for and are used by the public in his respective districts.

Within the past two or three years deponent has frequently observed the vapor sulphur fumes emitting from the furnaces of the defendants. These fumes are of a somewhat whitish or greyish color, sometimes resembling a sort of haze or mist. These fumes or mist have an exceedingly unpleasant odor which is marked both in extent and character.

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Prior to the time mentioned the timber in the district of said county in which deponent resides was healthy and in good condition. It contained only an ordinary natural per cent. of dead timber, such as trees which died from natural old age, or trees which had been girdled or burnt or struck by lightning. Since these fumes have been emitted a marked difference has occurred in the character of said timber. The per cent. of dead timber has enormously increased. Certain classes of timber have been either entirely or almost wholly exterminated, such as the hickory and chestnut oak, and other timber such as the white pine is also dying in great quantities.

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years longer if the timber continues to be affected in the future as it is now and has been within the past two or three years.

R. L. HILL.

Subscribed and sworn to before me, this March 8, 1906.

J. C. CHABLE,
Notary Public, Murray County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

J. P. GREGORY } 26 District, 2 sec., Murray county, Ga., 43 years.

GEORGIA, Murray County.

Personally appeared the undersigned, who, being duly sworn in the above stated case, says as follows:

That he lives in the above stated county and in the section and district set opposite his name. He has resided in said county for the number of years which is likewise set opposite his name.

Deponent has had a general knowledge of the public roads

and highways which have been established for and are used by the public in his respective districts.

Within the past two or three years deponent has frequently observed the vapor sulphur fumes emitting from the furnaces of the defendants. These fumes are of a somewhat whitish or greyish color, sometimes resembling a sort of haze or mist. These fumes or mist have an exceedingly unpleasant odor which is marked both in extent and character.

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J. P. GREGORY.

Subscribed and sworn to before me, this March 3, 1906.

E. A. EARNEST,

N. P. and J. P. 1013th District, G. M., Murray County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

A. H. GREEN { 27 District, 2d sec., Farmer and J. P.

GEORGIA, Murray County.

Personally appeared the undersigned, who, being duly sworn in the above stated case, says as follows:

That he lives in the above stated county and in the section and district set opposite his name. He has resided in said county for the number of years which is likewise set opposite his name.

Deponent has had a general knowledge of the public roads and highways which have been established for and are used by the public in his respective districts.

Within the past two or three years deponent has frequently observed the vapor sulphur fumes emitting from the furnaces of the defendants. These fumes are of a somewhat whitish or greyish color, sometimes resembling a sort of haze or mist. These fumes or mist have an exceedingly unpleasant odor which is marked both in extent and character.

On days when the atmosphere is heavy and the wind is blowing in a direction from the premises of defendants these fumes appear to have considerable cohesive qualities and float in the air great distances. They frequently settle towards the earth, coming in contact with the trees and smaller vegetation.

Prior to the time mentioned the timber in the district of said county in which deponent resides was healthy and in good condition. It contained only an ordinary natural per cent. of dead timber, such as trees which died from natural old age, or trees which had been girdled or burnt or struck by lightning. Since these fumes have been emitted a marked difference has occurred in the character of said timber. The per cent. of dead timber has enormously increased. Certain classes of timber have been either entirely or almost wholly exterminated, such as the hickory and chestnut oak, and other timber such as the white pine is also dying in great quantities.

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A. H. GREEN.

Subscribed and sworn to before me, this March 8, 1906.

J. C. CHABLE,

Notary Public, Murray County, Georgia.

No. 13. ORIGINAL.

In the Supreme Court of the United States,

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

J. C. CHABLE } 27 Dis. 2d Sec., 7 years, Miller.

GEORGIA, Murray County.

Personally appeared the undersigned, who, being duly sworn in the above stated case says, as follows:

That he lives in the above stated county and in the section and district set opposite his name. He has resided in said county for the number of years which is likewise set opposite his name.

Deponent has had a general knowledge of the public roads and highways which have been established for and are used by the public in his respective districts.

Within the past two or three years deponent has frequently observed the vapor sulphur fumes emitting from the furnaces of the defendants. These fumes are of a somewhat whitish or grayish color; sometimes resembling a sort of haze or mist. These fumes or mist have an exceedingly unpleasant odor which is marked both in extent and character.

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in the future as it is now and has been within the past two or three years. J. C. CHABLE.

Subscribed and sworn to before me this March 8, 1906.

J. C. CHABLE,
Notary Public, Murray County, Ga.

No. 13. ORIGINAL.

In the Supreme Court of the United States.

OCTOBER TERM, 1905.

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

P. G. POTEET, { 27 Dis., 2d Sec., 36 years Farmer.

STATE OF GEORGIA,
Murray County.

Personally appeared the undersigned, who, being duly sworn in the above stated case, says as follows:

That he lives in the above stated county and in the section and district set opposite his name. He has resided in said county for the number of years which is likewise set opposite his name.

Deponent has had a general knowledge of the public roads and highways which have been established for and are used by the public in his respective districts.

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P. G. POTEET.

Subscribed and sworn to before me, this March 8th, 1906.

J. C. CHABLE,
Notary Public, Murray County, Georgia.

~~5 Orig'l~~ Orig.
~~C. T. 190~~ T. 1907

FILE COPY.

IN THE

Supreme Court of the United States

OCTOBER TERM, 1906

~~No. 5 ORIGINAL CAUSE~~
~~IN EQUITY~~

Office Supreme Court U. S.
FILED
APR 23 1906
JAMES H. MCKENNEY,

THE STATE OF GEORGIA, BY ITS ATTORNEY GENERAL, JOHN C. HART, *Plaintiff*

vs.

THE TENNESSEE COPPER COMPANY, AND THE DUCKTOWN SULPHUR, COPPER & IRON COMPANY, LIMITED, *Defendants*

AFFIDAVITS IN SUPPORT OF ARGUMENT OF DEFENDANT TENNESSEE COPPER COMPANY ON APPLICATION OF PLAINTIFF FOR PRELIMINARY RESTRAINING ORDER

MARTIN H. VOGEL
Of Counsel

HOWARD CORNICK,
JOHN H. FRANTZ,
Attorneys for Tennessee Copper Company

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IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff.*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE,
County of Knox.

Personally appeared before me the undersigned authority, a Notary Public, Charles M. Seymour, who being first duly sworn herein on his oath did say: That he is a practicing attorney in the City of Knoxville, Tennessee, and at the instance of counsel for Tennessee Copper Company read the bill in this cause with respect particularly to the allegations of depreciation of property values in the northern part of Georgia, and then went to Atlanta, Georgia, during the latter part of the month of October, 1905, and while in Atlanta, Georgia, obtained from the Hon. William A. Wright, Comptroller General of the State of Georgia, certified statements of the taxable value of personal and real property in the Counties of Murray, Gilmer, Fannin, Union and Towns, in the State of Gtorgia, covering the years from 1890 to 1905, inclusive, which certified statements are herewith filed marked "A," "B," "C," "D," and "E," respectively. From the data so ob-

tained this affiant has prepared a table of taxable values covering the five counties above mentioned for the years mentioned, which table of taxes is as follows:

Aggregate Value of Whole Property, Both Real Estate and Personal Property, Returned for Taxation for the Years from 1890 to 1905 Inclusive for the Counties of Fannin, Gilmer, Murray, Towns and Union in the State of Georgia.

Years	Fannin	Gilmer	Murray	Towns	Union	Total for All Counties
1890	$610,105	$709,786	$1,306,658	$366,070	$616,680	$3,609,299
1891	643,674	787,135	1,289,733	383,103	620,693	3,724,338
1892	668,813	786,982	1,252,216	410,926	656,049	3,774,986
1893	634,116	729,330	1,165,920	386,725	656,999	3,576,090
1894	619,201	701,541	1,042,717	375,852	622,850	3,362,161
1895	629,431	663,782	996,811	354,271	582,739	3,227,034
1896	632,479	663,567	1,001,739	349,581	554,175	3,201,541
1897	658,175	653,250	993,577	360,474	528,737	3,194,213
1898	686,932	652,017	1,000,269	360,378	531,270	3,230,866
1899	719,170	688,345	1,043,332	349,718	528,857	3,329,422
1900	721,172	716,120	1,072,911	383,093	553,904	3,447,200
1901	643,674	787,135	1,289,733	383,103	620,693	3,724,338
1902	668,813	786,982	1,252,216	410,926	656,049	3,774,985
1903	935,795	769,366	1,100,924	376,180	576,845	3,759,110
1904	1,080,606	802,391	1,157,704	401,445	590,394	4,032,540
1905	1,019,709	827,500	1,265,111	418,851	640,845	4,172,016

From the table it appears that there was a uniform decrease of taxes in said counties in the aggregate from the year 1891 to the year 1897, and that from 1897 to 1905 the increase has been almost uniform. In the Fannin County statement for 1905 it appeared that there was a loss in taxable value amounting to $60,897. In view of the fact that Fannin county lies nearest to the copper operations, and would therefore be presumed to be

worse injured than the other counties, affiant on the 9th of November and again on the 17th of November, 1905, went to the county seat of Fannin County, Georgia, to ascertain the cause of the apparent depreciation and obtain certified statements of the tax values of Fannin County, Georgia, by districts, for all the years for which books were found to be in existence as follows: 1895, 1897, 1898, 1899, 1902, 1904 and 1905. Said certified copies are herewith filed as exhibits to this affidavit marked respectively exhibits "F," "G," "H," "I," "J," "K," and "L." From these certified statements it appears that the loss of the year 1905 as compared with the year 1904 was confined to the militia district of Mineral Bluff, in which it appears that the loss was $119,927 in taxable value. Thereupon examination was made to ascertain the cause of this loss, and it was found that for 1904 the taxes of Beebe & Sons Tannery Company were returned in Mineral Bluff District at $127,250. Said Tannery company finding that their taxes should have been returned in Toccoa District instead of Mineral Bluff District and believing its tax valuation to be too high, it filed protest with the proper officials and after arbitration the valuation of its whole property was fixed for the year 1905 at $16,690, making the difference of $110,560 for that year in that district, and in addition its tax valuation was returned in Toccoa District. A certified statement of the reduction of the taxes of said Tannery Company is herewith filed as exhibit "M" to this affidavit.

So that instead of there being a decrease in Fannin County taxable values for the year 1905 of $60,897, as shown by the statement of the Comptroller General, exhibit "C," there was a

positive increase of $49,663 in tax valuation of the whole county in order to overcome the reduction of $110,560 obtained by the Tannery Company. Thereupon inquiry was made for the purpose of ascertaining whether the reduction of the tax value of the Tannery Company's property could be attributed to smoke or gases from the copper operations at Ducktown, Tennessee, and it was found that no complaint had ever been made by the Tannery Company of any injury from that source, and further, that its property amounting to only forty acres of land, situated about ten miles from Ducktown, and covered with factory buildings, was not of the character of property that could be injured by such smoke or gases. It was further found by inquiry that after the assessment of said property for the year 1905 said Beebe & Sons Tannery Company sold its property during the year 1905 to the Union Tannery Company for $115,000, as shown by deed which is of record in Fannin County. So that there was no depreciation in fact.

Affiant has compiled from exhibits "F," "G," "H," "I," "J," "K," and "L" a table showing the statistics of tax valuation for those of the districts in Fannin County, Georgia, lying nearest to the Tennessee State line, those being the districts alleged to be most affected by the influence of smoke and gases from the Duck town copper operations. The table is as follows:

District	Year	Aggregate Value of Land including Buildings	Aggregate Value of City and Town Property	Aggregate Value of Whole Property
Fair Play	1895	$15,296		$24,690
	1897	14,481	$ 20	23,055
	1898	15,594		24,292
	1899	15,272		24,178
	1902	16,879	250	27,310
	1904	18,329	860	32,780
	1905	19,129	850	36,360
Flint Hill	1895	17,121	220	31,021
	1897	16,691	300	31,813
	1898	19,959	1,650	40,190
	1899	20,764	11,500	43,294
	1902	23,342	5,500	55,771
	1904	28,870	2,815	57,451
	1905	22,134	4,492	59,657
Hot House	1895	30,579	1,350	50,014
	1897	30,849	1,000	50,127
	1898	30,712	700	50,876
	1899	32,861	600	52,195
	1902	31,983	1,540	52,426
	1904	35,863	2,200	57,933
	1905	34,712	775	55,500
Mobile	1895	20,608	25	35,291
	1897	21,479	115	38,511
	1898	22,328	150	39,661
	1899	22,594		44,001
	1902	20,651	120	45,359
	1904	20,992	405	48,970
	1905	31,119	675	56,685

So that it appears from the above that even in those districts alleged to be most seriously injured there has been an almost uniform increase in tax valuations.

CHAS. M. SEYMOUR.

Subscribed and sworn to before me on this November 18th, 1905.

[SEAL]

EDWARD HACKER,
Notary Public, Knox County, Tennessee.

Exhibit "A" Affidavit of Chas. M. Seymour.

Real Estate, Personal Property, and Aggregate Value of Whole Property Returned for Taxation for the Years from 1890 to 1905 inclusive in the County of Murray, State of Georgia.

Year	Real Estate	Personal Property	Aggregate Value of Whole Property
1890	$830,759	$475,889	$1,306,658
1891	816,374	473,359	1,289,733
1892	808,576	443,640	1,252,216
1893	777,565	388,355	1,165,920
1894	726,034	316,683	1,042,717
1895	705,572	291,239	996,811
1896	693,947	307,792	1,001,739
1897	697,436	216,141	993,577
1898	698,347	301,922	1,000,269
1899	700,249	343,038	1,043,332
1900	704,316	368,595	1,072,911
1901	816,374	473,359	1,289,733
1902	808,576	443,640	1,252,216
1903	729,815	371,109	1,100,924
1904	746,055	411,649	1,157,704
1905	760,403	495,708	1,265,111

I, William A. Wright, Comptroller General of the State of Georgia, do hereby certify that the above is a true and correct statement of the real estate, personal property and aggregate value of the whole property returned for taxation by the tax payers of Murray County, Georgia, for the years from 1890 to 1905, inclusive, as appears from the tax books now on file in this office, and which are required to be kept in this office by law.

Given under my hand and seal of office this 24th day of October, 1905.

[SEAL]

WM. A. WRIGHT,
Comptroller General.

Exhibit "B" Affidavit of Chas. M. Seymour.

Real Estate, Personal Property, and Aggregate Value of Whole Property Returned for Taxation for the Years from 1890 to 1905 inclusive in the County of Gilmer, State of Georgia.

Year	Real Estate	Personal Property	Aggregate Value of Whole Property
1890	$440,941	$268,845	$709,786
1891	478,899	308,236	787,135
1892	490,204	296,778	786,982
1893	457,978	271,352	729,330
1894	431,836	269,705	701,541
1895	420,901	242,881	663,782
1896	421,485	242,082	663,567
1897	419,735	233,515	653,250
1898	418,834	233,183	652,017
1899	428,910	259,435	688,345
1900	440,565	275,555	716,120
1901	478,899	308,236	787,135
1902	490,204	296,778	786,982
1903	458,724	310,642	769,366
1904	473,528	328,863	802,391
1905	477,611	349,889	827,500

I, William A. Wright, Comptroller General of the State of Georgia, do hereby certify that the above is a true and correct statement of the real estate, personal property, and aggregate value of the whole property returned for taxation by the tax payers of Gilmer County, Georgia, for the years from 1890 to 1905 inclusive, as appears from the tax book now of file in this office, and which are required to be kept in this office by law.

Given under my hand and seal of office, this 24th day of October, 1905.

[SEAL]

WM. A. WRIGHT,
Comptroller General.

Exhibit "C" Affidavit of Chas. M. Seymour.

Real Estate, Personal Property, and Aggregate Value of Whole Property Returned for Taxation for the Years from 1890 to 1905 inclusive in the County of Fannin, State of Georgia.

Year	Real Estate	Personal Property	Aggregate Value of Whole Property
1890	$368,257	$247,848	$610,105
1891	394,564	249,110	643,674
1892	429,347	239,466	668,813
1893	402,254	231,862	634,116
1894	395,466	223,735	619,201
1895	392,498	236,933	629,431
1896	389,939	242,540	632,479
1897	401,736	256,439	658,175
1898	415,600	271,332	686,932
1899	425,601	293,569	719,170
1900	432,653	288,519	721,172
1901	394,564	249,110	643,674
1902	429,347	239,466	668,813
1903	529,975	405,820	935,795
1904	670,748	409,858	1,080,606
1905	602,114	417,595	1,019,709

I, William A. Wright, Comptroller General of the State of Georgia, do hereby certify that the above is a true and correct statement of the real estate, personal property, and aggregate value of the whole property returned for taxation by the tax payers of Fannin County, Georgia, for the years from 1890 to 1905 inclusive, as appears from the tax books now of file in this office, and which are required to be kept in this office by law.

Given under my hand and seal of office this 24th day of October, 1905.

[SEAL]

WM. A. WRIGHT,
Comptroller General.

Exhibit "D" Affidavit of Chas. M. Seymour.

Real Estate, Personal Property, and Aggregate Value of Whole Property Returned for Taxation for the Years from 1890 to 1905 inclusive in the County of Union, State of Georgia.

Year	Real Estate	Personal Property	Aggregate Value of Whole Property
1890	$339,819	$276,861	$616,680
1891	346,548	274,145	620,693
1892	378,191	277,858	656,049
1893	368,053	288,946	656,999
1894	351,725	271,125	622,850
1895	339,780	242,959	582,739
1896	329,210	229,965	554,175
1897	318,948	209,789	528,737
1898	316,360	214,910	531,270
1899	312,560	216,297	528,857
1900	314,961	238,943	553,904
1901	346,548	274,145	620,693
1902	378,191	277,858	656,049
1903	325,756	251,089	576,845
1904	332,993	257,401	590,394
1905	350,418	290,427	640,845

I, William A. Wright, Comptroller General of the State of Georgia, do hereby certify that the above is a true and correct statement of the real estate, personal property and aggregate value of the whole property returned for taxation by the tax payers of Union County, Georgia, for the years from 1890 to 1905 inclusive as appears from the tax books now of file in this office, and which are required to be kept in this office by law.

Given under my hand and seal of office this 24th day of October, 1905.

[SEAL]

WM. A. WRIGHT,
Comptroller General.

Exhibit "E" Affidavit of Chas. M. Seymour.

Real Estate, Personal Property, and Aggregate Value of Whole Property Returned for Taxation for the Years from 1890 to 1905 inclusive in the County of Towns, State of Georgia.

Year	Real Estate	Personal Property	Aggregate Value of Whole Property
1890	$200,029	$166,041	$366,070
1891	208,103	195,000	383,103
1892	232,740	178,186	410,926
1893	227,588	159,137	386,725
1894	219,093	156,759	375,852
1895	207,068	147,203	354,271
1896	209,729	139,852	349,581
1897	212,458	148,016	360,474
1898	213,706	143,672	360,378
1899	206,853	142,866	349,718
1900	219,339	163,754	383,093
1901	208,103	195,000	383,103
1902	232,740	178,186	410,926
1903	222,116	154,064	376,180
1904	235,139	166,306	401,445
1905	244,956	173,895	418,851

I, William A. Wright, Comptroller General of the State of Georgia, do hereby certify that the above is a true and correct statement of the real estate, personal property and aggregate value of the whole property returned for taxation by the tax payers of Towns County, Georgia, for the years from 1890 to 1905 inclusive, as appears from the tax books now of file in this office, and which are required to be kept in this office by law.

Given under my hand and seal of office this 24th day of October, 1905.

[SEAL]

WM. A. WRIGHT,
Comptroller General.

Exhibit "F" Affidavit of Chas. M. Seymour.

Total Taxes Returned for the Minor Civil Divisions of Fannin County, Georgia, for the Year 1895.

Militia District	Aggregate Value of Lands including Buildings	Aggregate Value of City or Town Property	Aggregate Value of Whole Property
930	$23,904	$ 200	$47,181
1,025	15,296		24,690
1,205	17,121	220	31,021
1,029	30,579	1,350	50,014
1,308	17,607	70	28,316
913	46,182	4,365	77,772
1,102	20,608	25	35,291
1,457	17,298	6,867	35,655
844	22,767	60	37,898
1,242	6,900		12,358
1,027	25,775		46,901
1,047	27,367	70	42,343
1,488	16,905		28,444
1,265	42,366	26,113	108,725
Whole County	$353,158	$39,340	$629,431

STATE OF GEORGIA,
Fannin County.

I, W. A. Daves, Ordinary of Fannin County, do hereby certify that the above and foregoing statements are true copies as appears on digest of file in this office. This November 9, 1905.

[SEAL]

W. A. DAVES,
Ordinary.

Exhibit "G" Affidavit of Chas. M. Seymour.

Total Taxes Returned for the Minor Civil Divisions of Fannin County, Georgia, for the Year 1897.

Militia District	Aggregate Value of Land, including Buildings	Aggregate Value of City and Town Property	Aggregate Value of Whole Property
930	$24,424	$ 580	$50,103
1,025	14,481	20	23,055
1,205	16,991	300	31,813
1,308	15,129	40	25,497
1,229	30,849	1,000	50,127
1,457	19,663	6,505	39,061
1,130	21,479	115	38,511
913	40,395	2,447	67,460
844	23,740	135	38,940
1,242	5,952	45	10,519
1,027	28,391		48,583
1,488	20,328	35	32,153
1,047	27,975	25	45,524
1,265	43,031	35,110	133,659
Whole County	$355,299	$46,437	$658,175

STATE OF GEORGIA,
Fannin County.

I, W. A. Daves, Ordinary of said county, do hereby certify that the above statement is that that appears of record in this office which will appear by reference to the digests for said year. This November 9th, 1905.

[SEAL]

W. A. DAVES,
Ordinary.

Exhibit "H" Affidavit of Chas. M. Seymour.

Total Taxes Returned for the Minor Civil Divisions of Fannin County, Georgia, for the Year 1898.

Militia District	Aggregate Value of Land, including Buildings	Aggregate Value of City and Town Property	Aggregate Value of Whole Property
Coldwell	$24,051	$ 370	$49,400
Fair Play	15,594		24,292
Flint Hill	19,959	1,650	40,190
Hemptown	14,237	50	25,380
Hot House	30,712	700	50,876
Mineral Bluff	16,150	6,665	34,853
Mobile	22,328	150	39,661
Morganton	41,371	1,710	67,948
Noontootla	25,856	210	42,519
Rock Creek	6,732	55	11,597
Skeinah	27,185		48,159
Stock Hill	17,495	60	30,846
Sugar Creek	27,569	216	45,790
Toccoa	43,410	49,889	153,143
Whole County	$354,346	$61,800	$686,932

STATE OF GEORGIA,
Fannin County.

I, W. A. Daves, Ordinary of said County, do hereby certify that the above and foregoing statements are a true copy as appears on the digest for this year and is of file in this office. This November 9th, 1905.

[SEAL]

W. A. DAVES,
Ordinary.

Exhibit "I" Affidavit of Chas. M. Seymour.

Total Taxes Returned for the Minor Civil Divisions of Fannin County, Georgia, for the Year 1899.

Militia District	Aggregate Value of Land, including Buildings	Aggregate Value of City and Town Property	Aggregate Value of Whole Property
Coldwell	$22,674	$ 285	$48,067
Fair Play	15,272		24,178
Flint Hill	20,764	1,500	43,294
Hemptown	13,961	60	24,589
Hot House	32,861	600	52,195
Mineral Bluff	16,390	6,075	36,452
Mobile	22,594		44,001
Morganton	39,247	1,507	66,136
Noontootla	25,677	160	43,430
Rock Creek	5,902	25	11,857
Skeinah	27,258		49,835
Stock Hill	20,590	60	33,035
Sugar Creek	27,507	616	45,947
Toccoa	48,021	54,896	174,401
Whole County	$359,587	$66,014	$719,170

STATE OF GEORGIA,
Fannin County.

I, W. A. Daves, Ordinary of said County, do hereby certify that the above and foregoing statements are a true copy as appears of record or of file in this office. This November 9th, 1905.

[SEAL]

W. A. DAVES,
Ordinary.

Exhibit "J" Affidavit of Chas. M. Seymour.

Tax Returns for the Minor Civil Divisions of Fannin County, Georgia, for the Year 1902.

Militia District	Aggregate Value of Land, including Buildings	Aggregate Value of City and Town Property	Aggregate Value of Whole Property
Coldwell	$27,379	$ 495	$60,185
Fair Play	16,879	255	27,310
Flint Hill	23,342	5,500	55,771
Hot House	31,983	1,540	52,426
Hemptown	13,806	218	25,996
Mobile	20,651	120	45,359
Mineral Bluff	13,382	6,890	32,605
Morganton	45,187	3,898	77,999
Noontootla	25,663	285	43,851
Rock Creek	6,262	60	11,352
Skeinah	25,104	1,100	47,342
Stock Hill	18,616	999	31,165
Sugar Creek	33,390	1,675	56,943
Toccoa	54,761	92,893	277,935
Whole County	$393,514	$116,804	$887,683

STATE OF GEORGIA,
Fannin County.

I, W. A. Daves, do hereby certify that the above statements will appear of file in this office. This November 9th, 1905.

[SEAL]

W. A. DAVES,
Ordinary.

Exhibit "K" Affidavit of Chas. M. Seymour.

Tax Returned for the Minor Civil Divisions of Fannin County, Georgia, for the Year 1904.

No.	Militia District	Aggregate Value of Lands, including Buildings	Aggregate Value of City or Town Property	Aggregate Value of Whole Property
982	Coldwell	$30,763	$ 685	$64,809
1,025	Fair Play	18,329	850	32,780
1,205	Flint Hill	28,870	2,815	57,451
1,029	Hot House	35,863	2,200	57,933
1,308	Hemptown	13,716	175	26,168
1,120	Mobile	20,902	405	48,970
1,459	Min'l Bluff	141,323	12,450	172,052
913	Morganton	49,776	4,607	85,644
844	Noontootla	24,198		42,085
1,242	Rock Creek	5,963	50	11,157
1,488	Stock Hill	19,112	540	31,558
1,027	Skeinah	24,068	1,300	47,359
1,047	Sugar Creek	26,893	1,012	46,018
1,265	Toccoa	66,356	102,033	319,464
Whole County		$540,726	$130,022	$1,080,606

STATE OF GEORGIA,)
Fannin County.)

I, W. A. Daves, do certify that the above statements appear of file in this office as shown above. This November 9th, 1905.

[SEAL] W. A. DAVES,
Ordinary.

Exhibit "L" Affidavit of Chas. M. Seymour.

Tax Returns for the Minor Civil Divisions of Fannin County, Georgia, for the Year 1905.

Districts	Aggregate Value of Lands including Buildings	Aggregate Value of City or Town Property	Aggregate Value of Whole Property
Coldwell	$32,753	$ 785	$70,772
Fair Play	19,129	850	36,360
Flint Hill	22,134	4,492	59,657
Hot House	34,710	775	55,500
Hemphill	15,716	1,220	30,496
Mobile	31,119	675	56,685
Mineral Bluff	16,731	13,380	52,126
Morganton	51,507	6,098	88,040
Noontootla	25,496	80	43,339
Rock Creek	7,538	50	13,313
Stock Hill	20,141	500	33,055
Skeinah	26,299	1,700	51,464
Sugar Creek	29,761	1,627	52,676
Toccoa	67,231	95,620	301,030
Whole County	$400,265	$127,852	$944,513
Grand Total	$473,202	$128,912	$1,019,709

STATE OF GEORGIA,)
Fannin County.)

I, W. A. Daves, Ordinary of Fannin County, Georgia, do hereby certify that the above and foregoing statements are true as will appear by reference to digest 1905. This November 17, 1905.

[SEAL] W. A. DAVES.
Ordinary.

Exhibit "M" Affidavit of Chas. M. Seymour.

Tax Returns for the Years 1904-1905 Against Beebe & Sons Tannery Company at Mineral Bluff, Fannin County, Georgia.

1904

District	Total Acres of Land	Aggregate Value of Lands including Build'gs	Aggregate Value of Whole Property	Remarks
Mineral Bluff	40	$127.250	$127.250	

1905

Toccoa	40	$10.472	$16,690	Per Prop.6,218

STATE OF GEORGIA,
Fannin County.

I, W. A. Daves, Ordinary of Fannin County, do hereby certify that the above and foregoing statements are true as will appear by reference to the digest of 1904. This November 17, 1905.

[SEAL] W. A. DAVES,
Ordinary.

Affidavits of B. M. Doyle, M. D., Ph. D., et al.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, the witnesses whose names are hereunto subscribed, who being first duly sworn herein on their oath did say: That they and each of them are residents of the territory adjacent to Polk County, Tennessee; that they and each of them are practicing physicians, and that in their practice they are acquainted with the health of the communities in both Georgia and Tennessee adjacent to the copper operations in Polk County, Tennessee; that they practice their profession in the states of both Georgia and Tennessee, and that in the practice of their profession they have had occasion to know the condition of the health of communities in localities other than the localities adjacent to the copper operations at Ducktown, Tennessee, and they state from their own knowledge, observation and experience that there are no detrimental effects to the health of the inhabitants of the localities adjacent to Ducktown, Tennessee, occasioned by the operations of the copper companies. Affiants further state that the fumes from the copper oper-

ations are not detrimental to the health of the inhabitants of the adjacent territory, but on the contrary they state that the health of such inhabitants is as good now as it has ever been, and that it is as good as the health of persons in communities in other localities not subjected to such fumes.

B. M. DOYLE, M. D. Ph. D.
A. W. LEWIS, M. D.
E. M. AKINS, M. D.
J. B. BEARDEN, M. D.,
Gilmer Co., Ellijay, Ga.

J. J. BARNES, M. D.
W. V. GARRETT, M. D.
L. E. KINSEY, M. D.,
Ducktown, Tenn.

R. L. HYDES, M. D.,
Isabella, Tennessee.

Sworn to and subscribed before me this November 11, 1905.
[SEAL] G. G. HYATT,
Notary Public.

Affidavit of H. A. Rogers, M. D.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, H. A. Rogers, who being first duly sworn herein, on his oath did say: That he is fifty years of age, and is a practicing physician and surgeon, and is a citizen and resident of Polk County, Tennessee. Affiant is a graduate of the Medical Department of the University of the City of New York of the Class of 1878, and has been in the regular practice of medicine since that date. After affiant's graduation in 1878 he became assistant surgeon for the Union Consolidated Mining Company, one of the copper companies at that time operating for copper at Ducktown, Tennessee, and was resident surgeon of said company under the receiver thereof until work ceased in 1879. After the Union Consolidated Mining Company ceased operations in 1879 affiant in 1880 went to the State of Texas and practiced there until 1886, returning to Athens, Tennessee, in 1887, and while located at Athens was medical examiner for the pension board until June, 1891, when affiant returned to Ducktown and became resident surgeon for the Duck-

town Sulphur, Copper and Iron Company (in which capacity he is now acting) and division surgeon for the Knoxville Southern Railroad Company and thereafter was also appointed Surgeon for the Pittsburg & Tennessee Copper Company, acting as such while that company was operating between the years 1891 and 1899, and until it suspended operations, and affiant was then appointed resident surgeon for the Tennessee Copper Company, the successor to Pittsburg & Tennessee Copper Company, when it began operations in 1899, and has acted in that capacity until the present time.

Affiant is acquainted with the territory adjacent to Ducktown, both on the Georgia and Tennessee side of the state line, and in the course of the practice of his profession has had opportunity to study the conditions of health in the vicinity of the copper operations. Affiant was personally acquainted with numerous men who worked regularly at the roast piles of the copper companies during the time when the ore was treated by the open heap method, these men being located at places where the smoke was most dense, and having been engaged in that particular businss for from three to six years, and affiant states that the general health of these men was good, and affiant has been unable to detect any detrimental effects upon those men from their contact with the concentrated fumes and gases from said roast heaps. Affiant further states that he has been in he smelter plants of both of the companies above mentioned where the gases were strongest, and is acquainted with the employes of the two companies whose work necessarily brings them in contact with the gases in the very strongest form, and affiant states that he has never known of any injurious effects being caused by the contact of such employes with said gases.

Affiant further states that he is acquainted with the conditions of health of the general community adjacent to said operations

and has never known of any detrimental or injurious results from such fumes or gases, but on the contrary has found by experience that the effect of the sulphur fumes on such diseases as hay fever, asthma, catarrh and other diseases of the bronchial tubes and mucous membrane, as well as all pulmonary troubles generally, have been very greatly benefited by the inhalation of the gases from these operations. The general health of the community both in Georgia and in Tennessee adjacent to these operations is as good as the general health of like communities in other sections of Tennessee or Georgia, and affiant states that there is absolutely no injurious effects upon the communities by the gases of these two companies under the present process and further that health of the inhabitants will not be impaired by any increased operations by said companies.

Affiant further states that sulphur and sulphurous acid gas is beneficial to many skin affections, skin diseases and diseases of the mucous membrane, and that it is universally so recognized by the medical profession, which considers sulphurous acid as efficacious in mucurial stomatitis, apthea, mucus patches, ulcers of the tonsils, diphtheria, hay fever, asthma, catarrh, and is also used in syphilitic tuberculosis, laryngitis, chronic bronchitis, small-pox, scarlet fever, etc., and is recognized by the best authorities as an excellent application in sloughing or gangrenous wounds.

Affiant further states that the health of the citizens and inhabitants of Georgia and of Tennessee has not been seriously injured nor impaired nor their vitality lessened, nor their susceptibility to all diseases greatly increased, but, on the contrary, shows that inhalation of gases from the works of said copper companies has been in no manner injorious to the health of such inhabitants, but on the contrary, to the firm belief of affiant, based on his own knowledge, experience and observation, the health of such citizens and inhabitants of Georgia is as good in the zone

alleged to be subjected to said fumes as in other localities not so affected.

H. A. ROGERS, M. D.

Subscribed and sworn to before me this 10th day of November, 1905.

[SEAL] G. G. HYATT,

Notary Public in and for Polk County, Tennessee.

Affidavit of J. M. Daves, M. D.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF GEORGIA, *Fannin County.*

Personally appeared before me, the undersigned, a Notary Public in and for said county of Fannin, J. M. Daves, who being first duly sworn herein on oath did say: That he is a resident and citizen of Fannin County, State of Georgia, and is 45 years of age; that he is a practicing physician and surgeon, being a graduate of Atlanta Medical College of Atlanta, Georgia; that he has been practicing medicine for 19 years; and is now a surgeon for the Louisville & Nashville Railroad Company at Blue Ridge, Georgia; and further that affiant in his practice of medicine and surgery has had an opportunity to observe the state

of health of the people of Fannin County, Georgia; that from affiant's observation and knowledge he states that the fumes and gases from the copper operations at Ducktown, Tennessee, near the state line between Tennessee and Georgia ar not deleterious to the health of the people of Fannin County, Georgia, but on the contrary states that the health of the people of Fannin County, Georgia, is now as good as it has ever been to affiant's knowledge.

Affiant further states, based on his own knowledge and experience and observation, that the health of the citizens of the zone alleged to be subjected to fumes from the copper operations at or near Ducktown, Tennessee, is as good as the health of the inhabitants of other localities not so affected.

J. M. DAVES, M. D.

Subscribed and sworn to before me this 11th day of November, 1905.

[SEAL.] J. F. HOLDEN,
Notary Public.

Affidavit of Charles A. Weller.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General*, JOHN C. HART, *Plaintiff*,

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE, }
County of Knox. }

Personally appeared before me, the undersigned authority, a Notary Public in and for Knox County, Tennessee, Charles A. Weller, who being first duly sworn herein upon his oath did say: That he is 47 years of age, and a graduate of the Virginia Polytechnic Institute of the Class of 1879; that he is engaged in the profession of practical mining engineering, and that he is a geologist; that during the past ten years he has made a special study of the geological conditions of Eastern Tennessee, Western North Carolina, and Northern Georgia, and incidental thereto during the past eight years he has made a particular study of the geological conditions of Fannin County, Georgia, and of that part of Fannin County adjacent to the copper operations at Ducktown. In doing this latter work affiant has for the past five years made a particular study of the streams of Fannin County, Georgia, for the purpose of determining the stability of such streams for water power purposes. In making this study many observations and estimates were made by affiant, and many photographs taken of the streams during the last five years. The work done in estimating the volume and flow of the water of the

streams above mentioned, as made about five years ago, has been verified by photographs taken and observations made as late as February, 1905.

Affiant has also during the last five years acquainted himself with the soil formation, public roads and general physical conditions of the country in the territory adjacent to Ducktown, and particularly that part of the territory lying in Fannin Coonty. Affiant has driven frequently over the roads, has walked through the country in the locality above mentioned on many occasions, and has made trips through the territory between Blue Ridge, Georgia, to McCays, Tennessee, in vehicles and on the railroad, in hand cars on trips of inspection.

The estimates and observations made of the water flow of the streams show that during five years there has been no perceptible diminution of the flow, and no change in the water volume, except during periods of extreme drouth. These periods of drouth are no more common to affiant's personal knowledge than are general in all similar mountain localities. As an example, estimates were made of the volume of water of Fighting Town Creek during the year 1900, and have been made at intervals at the same point until the year 1905. These observations and estimates were made at a point about eight miles southwest of the smelting plant of the Tennessee Copper Company, and about nine miles northwest of Blue Ridge, which is shown on the United States Geological Survey Map, Ellijay sheet, Edition of May, 1898. These observations and estimates demonstrate beyond doubt that there has been no change whatever in the water volume, nor in the water flow of Fighting Town Creek since the year 1900. This affiant has been over the same territory computing these streams with other competent mining engineers, and it has been the consensus of opinion of all of such engineers who have made observations that there has been no perceptible change in the flow and volume of water.

The public roads in Fannin County, Georgia, are in as good condition as the public roads in similar mountainous districts, and the erosion of the public roads is no greater than in other mountainous districts far removed from any possible influence of the smelter operations at Ducktown, Tennessee. The soil of the entire region in the vicinity of Ducktown, Tenn., and particularly in Fannin County, Ga., is thin and sterile, and it is not adapted to agricultural purposes. Probably ninety per cent of the lands in Fannin County, Georgia, consist of timber, which timber is of extremely poor quality. Affiant is one of the owners of 920 acres of land about eight miles in a direct line from the copper operations at Ducktown, Tennessee. Affiant has been on these lands in winter and in summer, and has never seen any dead trees thereon which could be ascribed to the gases from the copper operations; and has never seen any sign of smoke or gases in that part of Fannin County where said lands lie.

Affiant further states that in a general way he is acquainted with the health of the people of Fannin County, Georgia, and that he has never heard any complaints from any of the people with respect to any personal inconvenience or injury to health caused to them by the gases and smoke from Ducktown, either while at home or in the public roads; and that he has never heard complaint from any of the people living in the neighborhood of the lands of this affiant with respect to any injury to vegetation.

Affiant is not interested in this case except as a property owner in North Georgia, and affiant believes from his observations in North Georgia that it is almost the unanimous wish of the people that the copper operations shall not be interfered with, because the inhabitants generally realize that the copper industries located at Ducktown are of the greatest importance to them, affording a place where they may obtain employment and

earn money, where they may sell the products of their farms, and their timber as cord wood.

CHAS. A. WELLER.

Subscribed and sworn to before me on this November 17th, 1905.

[SEAL] EDWARD HACKER,
Notary Public, Knox County, Tennessee.

Affidavit of W. H. McCay.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, }
County of Polk. }

Personally appeared before me the undersigned, duly authorized to administer oaths in and for Polk County, Tennessee, W. H. McCay, who being first duly sworn herein on his oath says that he is one of the public road commissioners in and for said Flint Hill district, having control and supervision of the public roads in the said district, at the present time.

Affiant further states that the public roads in the State of Georgia, and more particularly in Flint Hill district, are not in any manner injured or interfered with by the operations from

said copper industries, and that said roads are as good as other mountain roads in the northern part of the State of Georgia.

Affiant further states that Flint Hill district adjoins the Tennessee and Georgia state line, and is just across the state line in said Fannin County, Georgia, from the copper industries in Polk County, Tennessee.

W. H. McCAY.

Sworn to and subscribed before me this the 17th day of November, 1905.

[SEAL.] G. G. HYATT,
Notary Public for Polk County, Tennessee

Affidavit of J. J. Wehunt.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
No. 13.

STATE OF TENNESSEE,
County of Polk.

Personally appeared before me the undersigned, duly authorized to administer oaths in and for Polk County, Tennessee, J. J. Wehunt, who being first duly sworn herein on his oath says that he is one of the public road commissioners in and for said Mobile district, having control and supervision of the public roads in said district, at the present time.

Affiant further states that the public roads in the State of Georgia, and more particularly in Mobile district, are not in any manner injured or interfered with by the operations from said copper industries, and that said roads are as good as other mountain roads in the northern part of the State of Georgia.

Affiant further states that Mobile district adjoins the Tennessee and Georgia state line, and is just across the state line in said Fannin County, Georgia, from the copper industries in Polk County, Tennessee.

J. J. WEHUNT.

Sworn to and subscribed before me this the 17th day of November, 1905.

[SEAL] G. G. HYATT,
Notary Public for Polk County, Tennessee.

Affidavit of Joseph Hyde Pratt.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF NORTH CAROLINA, *Orange County.*

Personally appeared before me the undersigned, a Notary Public in and for said State and County, Joseph Hyde Pratt, who being first duly sworn herein, on his oath did say:

That he is 35 years of age, is a graduate of Yale University and is at present Consulting Mining Engineer, Acting State Geologist of North Carolina, Field Geologist, U. S. Geological Survey and Professor of Economic Geology, University of North Carolina.

That in affiant's connection with the North Carolina Geological Survey, he has become interested in the relations of mining to agriculture and lumber industries and the effects produced on farming lands.

That affiant is acquainted with the soil conditions and roads in the northern part of Georgia, southeastern Tennessee and western North Carolina adjacent to the copper operations at Ducktown, Tenn.; but affiant has not visited the Ducktown basin, and has at various times since 1892 been in those areas for the purpose of mineral investigations.

That affiant's observations regarding the soil of the northern sections of Georgia, with the exception of the bottom lands along the larger streams and rivers, is that such soil is best adapted for grazing and is poor for ordinary agricultural purposes, as has been noticeable by the scant crops raised in early years and the abandonment of many farms in that section of the country.

That the destruction of timber by sulphurous fumes from the plants of the copper companies at Ducktown do not affect the washing away of soil to any greater extent than is now occasioned in many districts in Georgia, North Carolina and Tennessee by the wholesale cutting of timber by the large lumber companies and by the abandonment of farming lands. While it is true that the sulphurous fumes affect the vegetable growth, the fumes do not destroy the soil itself, and from affiant's observation, the destruction of timber by the sulphurous acid fumes is very small when compared with the enormous amount of timber that is annually destroyed by forest fires, which also burn out the undergrowth and have laid waste many large areas.

The destruction of timber and underbrush and other vegetable growth should not in any way cause any serious damage to roads traversing said district, if the roads are well constructed and drained. But in these sections of Georgia, Tennessee and North Carolina the roads are not well constructed and drained and are now being constantly washed and cut into gulleys, because of improper construction. Then again, the large amount of hauling over these roads, which are only repaired once or twice a year, keeps them in bad condition. This is also true in other mountainous sections of these states, which are well timbered and contain productive farming areas where the roads are built and maintained similarly as in the Ducktown and adjacent districts.

While the fumes given off by the plants of the copper companies at Ducktown are destructive to vegetable matter within a certain radius of the plants, they do not in affiant's belief have any serious effect upon human beings and do not interfere with pure air and sunlight beyond a very short radius of the copper operations. The atmosphere is not rendered foul or unwholesome and judging from the districts which affiant has visited and is acquainted with where similar fumes are being given off into the atmosphere, the health of the inhabitants in these places is comparable with any other portion of the country and their vitality is not lessened nor are they, as far as can be determined, any more sosceptible to diseases in general than people living in other sections.

JOSEPH HYDE PRATT.

Sworn to and subscribed before me this 24th day of November, 1905.

[SEAL] ALGERNON S. BARBEE,
Notary Public.

Affidavit of M. J. Webb.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
No. 13.

STATE OF TENNESSEE,
County of Knox.

Personally appeared before me, the undersigned authority, in and for said state and county, M. J. Webb, who, being first duly sworn herein, upon his oth, said:

That he is a citizen and resident of Ellijay, Georgia, and that he is the Mayor of the City of Ellijay; that he is the President of M. J. Webb & Company, which company is engaged at Ellijay, Georgia, in a general mercantile and lumber business; that he has been engaged in the lumber business for fifteen years; that his residence and citizenship has always been in Georgia since the suspension of mining operations at Ducktown in 1879; that he has worked in the lumber business in Western North Carolina, East Tennessee and North Georgia, and particularly in the counties of Gilmer, Murray and Fannin, in the state of Georgia, and that he is acquainted with the people of those three counties, with the roads, with the property values, with the health of the people, and with the general physical conditions of the country in said counties and adjacent thereto, and that he is acquainted with the territory in and around Ducktown, in Polk County, Tennessee.

The city of Ellijay is located 21½ miles almost due south from the copper operations at Ducktown in Polk County, Tennessee.

The country in the three counties above named is mountainous, and reaches an elevation at Ellijay of about 1,300 feet above sea level; at McCays, Georgia, which is on the state line between Georgia and Tennessee, the elevation above sea level is about 1,540 feet; at Blue Ridge, Georgia, between Ellijay and McCays the elevation is 1,750 feet. The country adjacent contains mountains which at distant points from Ducktown arise to an eletion of from 3,000 to 3,500 feet. The soil throughout the territory above mentioned is thin and poor as in other mountainous regions, There is no profitable farming and none can be carried on in those counties except in the most isolated cases. Many of the people living within those counties have abandoned their farms because of their unproductiveness, and leaving their property have moved themselves and their families to Ducktown, Tennessee, where they could make a better living at mining than they could make upon their farms. This condition is true outside of any territory in any manner influenced by the smoke and gases from the Ducktown operations.

Affiant as an individual and as a member of the company of M. J. Webb & Company is the owner of real estate in Gilmer County, Georgia, and affiant states of his own knowledge that there has been a general increase within a period of about seven years of from 25 per cent to 50 per cent in the value of the lands of that county. As an instance: Affiant knows of a piece of property which was purchased for $3,500.00 about ten years ago, from which the purchaser has sold enough property to pay the original cost price, and has recently been offered $6,000.00 for the remainder of the property. As another instance, affiant is the owner of a tract of land containing 140 acres which sold at public auction in either the year 1897 or 1898 for $140.00. During

the year 1902 one of this affiant's brothers bought that land for $200.00, partly on credit, and after buying the same cleared enough timber from it to pay its cost price to him. Thereafter, in 1903, this affiant bought same land at private sale for $275.00. From the land affiant has taken approximately $400.00 worth of timber, and is now offered $500,000 for the place. This property is about 25 miles on an air-line from the copper operations in Ducktown. The land has not been injured by smoke, and on the contrary this affiant states that the increase of values as above shown has been due solely to the operations being carried on by the copper companies at Ducktown, those companies having afforded a market for the wood which came from the land. Affiant now has upon that property approximately $150.00 worth of cord wood cut and stacked which he intends to have transported to Ducktown where he will find a ready sale for it, and affiant states that if the operations at Ducktown should cease or be interfered with, he personally would consider himself injured to the extent of the value of the wood upon the land.

As another instance, affiant knows of a piece of property belonging to a woman who was a resident of Gilmer County. She had offered to take $600.00 for her property prior to June, 1904, but could find no purchaser at that price. Thereafter she died and this affiant was appointed administrator of her estate and in October, 1904, in the settlement of her estate sold the same piece of property above mentioned at public auction for $730.00, and that that property has since that date increased in value until it is now worth more than $800.00. The foregoing are cited merely as instances, and there are to this affiant's knowledge many other instances too numerous to mention of general increase of values, all of which without exception this affiant attributes solely to the copper operations at Ducktown.

The increase in value began at Ducktown and gradually ex-

tended southward, and did not begin southward and gradually extend to the north.

The population of Gilmer and Fannin counties particularly has increased in the last few years, and this is especially true of that part of the population located in that part of Fannin county adjacent to the copper operations near the state line. The health of the people throughout the counties is to this affiant's knowledge in no manner affected by the smoke and gases from the copper operations, and to the contrary affiant states that to his personal knowledge citizens of Gilmer county suffering from various diseases have moved from their homes up to the region of Ducktown on account of the beneficial influences upon their health caused by the sulphur smoke at and near the Ducktown operations, and to affiant's knowledge those people who have so removed their residences on account of their health have been materially benefitted by the change. As an instance, one of this affiant's own cousins who was a citizen of Gilmer County and who on account of his health was not capable of doing a day's work, removed to the vicinity of Ducktown, was completely cured of what was supposed to be pulmonary trouble and is now earning about $50.00 per month at manual labor.

Before the mines began their operations in about the year 1890 the population particularly of Gilmer and Fannin counties was dependent to a large degree upon the agricultural resources of the country which, as hereinbefore shown, were very poor; the section was sparsely settled; there was no demand for labor; wages were low and there was no market for even the scant products of the farms. Since the operations of the mines there is a condition of prosperity throughout the entire region. Settlements of people within the state of Georgia are existing purely by reason of the copper operations, there is now a market for the farm produce, for the cord wood, for the timber, for

the labor, and merchants are in business and prospering who without the copper operations would be compelled to close their doors and move away. As an instance of comparative prices existing even at the present day, sweet potatoes which at Ellijay are worth 40 cents per bushel with practically no market, are transported to Ducktown where they may be sold at prices ranging from 60 to 75 cents per bushel, and sales are made to people who could not pay any price were it not for the fact that they have demand for labor by which they may earn wages. White beans worth $1.25 per bushel at Ellijay, with no market for their sale, are shipped to Ducktown and sold at $2.00 per bushel, and to this affiant's personal knowledge all other products of the farming country in Northern Georgia are about on a par with the above prices.

The prices prevailing during the period of suspension averaged about 6 cents per hour for first-class laboring men; at the present time in and about Ellijay, Georgia, laborers receive from 75 cents to $1.00 per day. The increased price to laboring men is caused directly by the competition of labor in the mining operations at Ducktown, the demand at that point affecting the local price of labor. At Ducktown, so this affiant is informed and believes, the prices range from $1.50 per day to $2.50 per day.

Affiant is acquainted with the public roads of the northern part of Georgia and particularly of Murray, Gilmer and Fannin counties. Affiant states that said roads are as good as the roads of other similar mountain districts where the roads receive the same relative amount of work; but affiant states that their condition is not so good as they could be made, because of the fact that the amount of work required by the laws of Georgia to be done upon said roads is not done. The roads do not receive the proper amount of work by the citizens. They are not advantageously laid off and can not therefore be economically maintained,

and affiant states of his own knowledge that the smoke and gases from the Ducktown copper operations have had absolutely nothing to do with the present condition of the roads unless it be that the population having become more dense and the travel having increased with a positive decrease in the work done in maintenance of the roads that their relative condition may not be quite so good as formerly, but affiant states of his own knowledge that there is no inconvenience or unhealthful or uncomfortable condition caused to the inhabitants of Georgia or to the travelers on the roads by copper operations, and that the washing and ruts complained of in the bill are due not so much to washing as to the lack of care of the roads.

Affiant is acquainted with the condition of the streams of North Georgia, and particularly of Murray, Gilmer and Fannin counties, and affiant states that any decrease in the streams has been caused by the clearing of the timber; that the smoke has not injured the flow or volume of the streams and that even the clearing for timber has had no worse effect upon the streams than would have been caused by clearing for agricultural purposes.

With respect to the injury to timber, affiant states that he is familiar with the allegations of the bill in this case, and that those allegations made with respect to the injury to timber are grossly exaggerated; that there is a slight injury to timber in Fannin County, Georgia, next to the state line, and close to the copper operations, but even the condition of the timber at that point can not be attributed solely to the copper operations and the fumes from the smelter plants. During the days when the smelters were operated with charcoal, the timber for miles around in every direction was cut, burned into charcoal and delivered at the mines. The stumps now standing bear witness to that fact, as 90 per cent of those stumps still show axe-marks. After the mines resumed operations about the year 1890 vast quantities of timber were cut

for cord wood, which was delivered to the companies and to the inhabitants. The best of the timber had been cut before mining operations were resumed, and that part of the timber which was damaged has practically all been cut and has brought a higher price in its damaged condition than it would have brought in an undamaged condition without the mining operations. Before the mines began operations timber, particularly the pines and chestnut in parts of the territory of North Georgia far remote from any possible influence from smoke, died as the result of timber cutting at improper seasons, and it has been this affiant's experience that where pine and chestnut is cut during the months of May and June that unless the timber is promptly removed and great caution taken, the worms will get into the tops and limbs left remaining and will kill trees for large areas adjacent to the area where the trees were cut, and affiant states of his own personal knowledge that this has occurred in many instances wholly outside of the smoke influence.

Affiant states of his own knowledge that those allegations of the bill with respect to the washing of the land and of the complete destruction of the soil cover, grasses, etc., are greatly exaggerated; that as a matter of fact the sod and soil cover is not injured except in the immediate vicinity of the smelters, and even within the immediate vicinity there is now as good grass as there is in any other part of that territory, the fact being that the cattle raised on the grass at Ducktown are regarded by all of the people throughout that territory as being superior to the cattle raised in other parts of the adjacent territory.

Affiant is acquainted with the general public particularly of the town of Ellijay and of Gilmer County, and it is the general opinion of the people that the mines should not be closed nor interfered with; and affiant states that with the exception of those persons interested in the Shippen Lumber Company of Ellijay,

Georgia, he has never heard but one man state that he had any desire that the mines be closed or interfered with. Why the Shippen Brothers Lumber Company desire the mines closed is unknown to this affiant unless it be that they desire to get men for laborers at lower wages. It is the current report among the people of Ellijay that Shippen Brothers have said in response to demands by their laborers for better wages, that when they succeeded in closing down the mines at Ducktown, they will have all the labor they need at less than the prices prevailing at present. All of the people so far as this affiant knows, and he has made investigation, have no desire whatever to see the mines closed, and few if any are taking any interest whatever in this lawsuit, with the exception of Shippen Brothers, who seem to be largely instrumental in the prosecution of this case, and in obtaining evidence against the mining companies. This affiant is not interested in the situation in any manner except as a citizen and a business man of Gilmer County. Insofar as the injury is concerned to Gilmer County and Murray County, there is no injury in either of those two counties, either to crops, timber or roads, and it is the belief of this affiant that the prosperity prevailing at present in those two counties and in the entire northern part of Georgia can be attributed solely to the mines and to their influence on the general situation, and it is this affiant's belief that that fact is recognized by the people of the entire territory adjacent to Ducktown, both in Georgia and Tennessee.

M. J. WEBB.

Sworn to and subscribed before me this 18th day of November, 1905.

[SEAL] EDWARD HACKER,

Notary Public, Knox County, Tennessee.

Affidavit of T. S. McKinney.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General* JOHN C. HART, *Plaintiff*,

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE, *Knox County.*

Personally appeared before me, the undersigned authority, a Notary Public in and for Knox County, Tennessee, T. S. McKinney, who being first duly sworn herein on his oath did say: That he is a citizen and resident of Knoxville, Knox County, Tennessee; that he was born at Chestnut Gap, in Fannin County, Georgia, and that he lived in Fannin County, Georgia, until about the year 1902, when he removed himself and his family to Knoxville, Tennessee; that his father and brothers all reside in Fannin County, Georgia. Affiant was engaged in the newspaper business at Blue Ridge, in Fannin County, Georgia, during the years from 1888 to 1898, and that during eight years of that time he was proprietor and editor of the Blue Ridge Post; that since March, 1898, he has been engaged in the general insurance business, having headquarters both at Blue Ridge, Fannin County, Georgia, and in Knoxville, Tennessee; that he has since 1888 in the ordinary course of his business had opportunity to observe the people and the general physical conditions of the counties of North Georgia, and particularly of Fannin and Gilmer Counties, North Georgia, and that his acquaintance extends throughout most of the counties of North Georgia. Affiant further states that his insurance busi-

ness now carries him constantly to Gilmer and Fannin Counties, Georgia, in the settlement of death claims in life insurance and in the settlement of fire losses in fire insurance; that he is consequently acquainted with the people and with the condition of their general health and prosperity; that in traveling through these counties he has traversed in public roads afoot and in vehicles, and is acquainted with the public roads of Fannin and Gilmer Counties, Georgia; that he is acquainted with the property of a large number of citizens of both Fannin and Gilmer Counties, Georgia. Affiant further states that he is the owner of virgin timber land in Fannin County, Georgia, and is a tax payer of that county. Gilmer and Fannin Counties, Georgia, are traversed by the Blue Ridge Range of mountains, which with its spurs cover almost entirely these two counties. The soil of these counties is poor. Farming is not a profitable business except in certain isolated instances. Almost the entire country is covered with timber within a radius of many miles from Ducktown, Tennessee. The timber in Fannin County, Georgia, has been cut over for the purpose of supplying the demand for charcoal and for wood for use in the copper operations, which have been in progress at Ducktown ever since this affiant can remember. In consequence that territory is at present, with few exceptions, covered with a small growth of short branchy trees which have little value except as cord wood or fire wood.

The roads throughout both these counties are of the same general character as roads found in other mountain counties, being steep and hilly and never laid out nor maintained with the same degree of care as is given to roads of agricultural districts where the country being more level will permit of good road maintenance; but affiant states of his own knowledge that the roads of Fannin and Gilmer Counties, Georgia, are as good as the roads in any of the other mountain counties of North Georgia

or Eastern Tennessee, and that to affiant's personal knowledge the fumes from the copper operations at Ducktown have in no manner hindered, obstructed or interfered with the roads of Fannin and Gilmer Counties, Georgia, or the use thereof by the inhabitants of those counties. These roads are in as good condition as they ever have been during the twelve years of this affiant's acquaintance with the same.

To this affiant's own knowledge the health of the people of Fannin and Gilmer Counties, Georgia, is not interfered with to the slightest degree. This is true even in those parts of Fannin County lying nearest to the copper operations at Ducktown, Tennessee.

Affiant has read the bill in this cause, and states of his own knowledge that the allegations of injury therein contained are greatly exaggerated. There has been no injury to vegetation within a radius of fifty miles of Ducktown in Georgia territory, the fact being that the injury is confined to a very small territory immediately adjacent to the state line and confined wholly within Fannin County, Georgia.

The timber land belonging to affiant has in no wise been injured nor has any other timber land in the neighborhood of his land.

This affiant is not interested in this lawsuit to any extent whatever except as a property owner of Fannin County, Georgia.

While on a trip through Northern Georgia recently affiant investigated for his own satisfaction with respect to the feeling of the people of the counties of Fannin, Gilmer, Union and Towns towards the litigation in this cause, and from the observations made affiant believes that fully eighty-five per cent of the people of Fannin County, Georgia, feel that it would be disastrous to them and to their interests if the works of the copper industry at Ducktown, Tennessee, should be interfered with, that fully ninety per cent of the people of Gilmer County feel that it would

be disastrous to their interests for the copper operations to be interfered with, and all of the people of these two counties so far as this affiant has been able to learn have no desire whatever to see the operations interfered with in any manner. Affiant states that fully ninety per cent of the people of the counties above mentioned other than Gilmer and Fannin Counties, Georgia, desire that the work shall continue, and are opposed to any interference. Upon investigation this affiant found that only one man and his associates in Fannin County, Georgia, were interested in the prosecution of this cause, and that the great mass and body of the people instead of feeling any necessity for intervention in their behalf by the State of Georgia, feel that their rights and their welfare will be jeopardized by the prosecution of this suit by the State of Georgia.

Affiant found that those of the people whose land lay so close to the operations that there had been some material injury to it did not desire that the copper operations should be interfered with but that their sole desire was that they should be compensated in damages for any injury done.

Affiant further states that the benefits to the people of North Goergia by way of increased value of their property, as well as by affording a market for the sale of their farming products and places where their men may have and obtain work, have been so great by comparison to the injury done by the copper operations that it would be a great calamity to the people of North Georgia for the copper operations at Ducktown, Tennessee, to be suspended, and to this affiant's best knowledge, information and belief these statements are borne out by the expressions of the vast majority of all of the people of the district alleged to be affected.

T. S. McKINNEY.

Subscribed and sworn to before me this 18th day of November, 1905.

[SEAL]

EDWARD HACKER,
Notary Public, Knox County, Tennessee.

Affidavit of Citizens of Fannin County, Ga.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, the witnesses whose names are hereunto subscribed, who, being first duly sworn herein on their oaths did say: That they and each of them are residents and citizens of Fannin County in the State of Georgia; that they are acquainted with the operations of the Tennessee Copper Company and the Ducktown Sulphur, Copper & Iron Company (Limited), of Polk County, Tennessee, and with the conditions of the timber, crops and vegetation in the northern part of the State of Georgia. Further they say that the injury as reported to the northern part of the State of Georgia is greatly exaggerated; that aside from slight injury to a small amount of scrub timber and undergrowth immediate adjacent to the state line between Georgia and Tennessee and just across the state line from the copper companies 'operations, there is practically no damage, and that beyond that distance there is no perceptible injury either to crops or timber.

Affiants further state that the public roads in the State of Georgia are not in any manner injured nor interfered with by the operations from said copper industries, and that said roads

are now as good as, if not better than they have ever been. And further, these affiants say that the smoke and gases from said works are not injurious to the health of the people of Georgia, nor to the people of Tennessee, living in the territory alleged to be affected by said smoke, but state on the contrary that the health of the communities alleged to be affected is as good now, if not better, than it has ever been before.

Affiants further state that the country adjacent to said copper operations, both in Georgia and Tennessee, is a wild and mountainous country, very sparsely settled, that the timber is almost entirely second growth, the original growth having been cut off, burned into charcoal and sold to the copper companies then operating during the period from 1860 to 1879; that the soil is poor and sterile, that it was never adapted to agricultural purposes; that mining is the predominating interest and paramount to all interests combined within a radius of fifty miles; that the mines offer a market for the produce of the farmers, for the sale of the timber as fire wood, and for building and mining purposes, and affords the only market for the labor of the inhabitants of the territory adjacent to said operations, and that without the operations of the copper industries in Polk County, Tennessee, the inhabitants of Northern Georgia, as well as the inhabitants of that part of Tennessee adjacent to said copper operations, would suffer a lack of employment in any line whatever, and that the closing down of said works would cause great hardship to thousands of said citizens and residents of the territory adjacent to said operations in North Carolina, in Georgia, and in Tennessee, who would be left destitute, without homes and without work, and would be compelled to remove themselves and their families to other parts of the country, seeking employment wherever they could find it, or to trust themselves to the charity of a stricken community.

E. P. GALLOWAY. J. E. LINDSAY.

W. D. Odary.
J. M. Parker.
H. L. Henson.
J. H. Campbell.
B. B. Bennett.
W. A. Ledford.
M. P. Bennett.
H. Roberts.
L. A. Richards.
C. H. Whites.
John White.
John Roberts.
H. T. Weese.
W. A. Calhoun.
Gus Smith.
H. Smith.
J. S. Shopel.
T. B. Turner.
L. C. Turner.
W. B. Shopel.
W. W. Hilbeck.
J. A. Hampton.
J. E. Wilson.
M. D. Richard.
H. Richards.
A. T. Paden.
J. W. King.
Wm. Falls.
O. G. Paden.
M. K. Powell.
C. G. Smith.
O. M. Bulridge.
J. T. Jones.
J. H. Cook.
R. L. Kell.
W. A. Medarks.
J. B. Ricketts.
J. H. Boldridge.
J. G. Woody.
L. W. Woody.
W. McFarland.
E. Block.
C. E. Foote.
W. S. Collihan.
G. Standridge.
F. E. Garner.
M. L. Burns.
G. L. Baker.
W. H. Robinson.
B. L. Beliles.
L. B. Hughes.
B. C. Wright.
J. B. Tanner.
T. A. Armstreck.
W. D. Stiles.
Davis Merrell.
J. C. Queen.
J. B. Trouthem.
L. C. Williams.
W. G. Davis.
W. A. Smith.
A. H. Shope.
W. S. Tanner.
A. L. Beliles.

W. P. Key.
C. J. Watson.
R. L. Turner.
F. E. Hickey.
L. M. Tanner.
J. F. Brown.
L. L. Weeks.
N. D. Panes.
H. A. Shelton.
S. M. Falls.
J. L. Williams.
J. E. Guy.
J. H. Burns.
G. O. Dasley.
J. E. Newton.
F. A. Bailey.
F. M. Cagle.
M. H. Cole.
E. M. Flowers.
J. D. Jenkins.
James Chastain.
S. O. Sutton.
O. P. Tillery.
W. F. Ellis.
L. T. Jones.
B. B. Bearden.
Bur Dooley.
N. C. Garren.
W. A. Keel.
Wm. Allen.
J. D. Thomason.
W. E. Bartlay.
M. R. Bredges.
J. D. Brown.
P. M. Brown.
L. C. Gass.
W. C. Skelton.
R. B. Stuart.
J. J. Kiker.
T. W. Gass.
R. M. Kaylor.
H. R. Tood.
A. S. Jones.
J. P. Stover.
W. A. Patterson.
N. T. Hughes.
C. G. Patterson.
I. T. Ralston.
W. A. Dilles.
G. W. Patterson.
W. C. Larance.
John Hayes.
H. Hayes.
J. D. Patterson.
T. D. Owen.
James Herron.
C. A. Jones.
Joe Dilbeck.
W. A. Williams.

Sworn to and subscribed before me this November 11th, 1905.

[seal]

G. G. Hyatt,
Notary Public.

Affidavit of Citizens of Gilmer County, Ga.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, the witnesses whose names are hereunto subscribed, who being first duly sworn herein, on their oaths did say: That they and each of them are residents and citizens of Gilmer County, State of Georgia, that they are acquainted with the conditions of the timber, crops and vegetation in the northern part of the State of Georgia, and particularly in said county. Further, they say that the injury as alleged to the northern part of the State of Georgia as being the results of the copper operations of Ducktown, Tennessee, is greatly exaggerated; that aside from slight injury to a small amount of scrub timber, and undergrowth immediately adjacent to the state line between Georgia and Tennessee, there is practically no injury, that beyond that distance there is no perceptible injury either to crops or timber, and that there is no perceptible injury whatever in Gilmer County, Georgia. Affiants further state that the public roads in the State of Georgia, and particularly in Gilmer County are not in any manner injured nor interfered with by the operations from said copper industries, and that said roads are now as good as if not better than they have

ever been, and further, that the smoke and gases from said works are not injurious to the health of the people of said county, but on the contrary the health of the community alleged to be affected in said county is as good now if not better than it has ever been before.

D. M. WILLIAMS.
G. R. DEAN.
J. B. CHANTS.
J. A. FOWLER.
J. E. COCHRAN.
JNO. WRIGHT.
F. L. JONES.
J. M. SCRUGGS.
W. H. BARCLAY.
W. M. WEBB.
A. B. FOWLER.
J. E. STONER.
L. M. ALLEN.
L. H. JAMES.
W. H. RALSTON.
H. H. FOSTER.
H. L. SMITH.

Sworn to and subscribed before me, this November 11th, 1905.

[SEAL]

G. G. HYATT,
Notary Public.

Affidavit of Citizens of Towns County, Ga.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General*,
JOHN C. HART, *Plaintiff*,

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, the witnesses whose names are hereunto subscribed, who being first duly sworn herein on their oaths did say: That they and each of them are residents and citizens of Towns County, State of Georgia, that they are acquainted with the conditions of the timber, crops and vegetation in the northern part of the State of Georgia, and particularly in said County. Further, they say that the injury as alleged to the northern part of the State of Georgia as being the result of the copper operations at Ducktown, Tennessee, is greatly exaggerated; and that there is no perceptible injury either to crops or timber in Towns County, Georgia.

Affiants further state that the public roads in the State of Georgia and particularly in Towns County are not in any manner injured nor interfered with by the operations of said copper industries and that said roads are now as good as if not better than they have ever been before, and further, that the smoke and gases from said works are not injurious to the health of the people of said county, but on the contrary the health of the community in

said county alleged to be affected is as good now if not better than it has ever been before.

JOHN BLAREY.	C. J. CARROLL.
J. M. BARNES.	CARL CARROLL.
D. M. ANDERSON.	J. L. COFFEY.
W. A. ANDERSON.	J. B. AMEY.
A. Y. HOOPER.	J. W. FERGUSON.
T. C. RAMSEY.	J. G. RAMEY.

Sworn to and subscribed before me this November 11th, 1905.

[SEAL] G. G. HYATT,
Notary Public.

Affidavit of Citizens of Union County, Ga.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, the witnesses whose names are hereunto subscribed, who being first duly sworn herein on their oaths did say: That they and each of them are residents and citizens of Union County, State

of Georgia, that they are acquainted with the conditions of the timber, crops and vegetation in the northern part of the State of Georgia, and particularly in said county. Further, they say that the injury as alleged to the northern part of the State of Georgia as being the results of the copper operations at Ducktown, Tennessee, is greatly exaggerated, that aside from slight injury to a small amount of scrub timber and undergrowth immediately adjacent to the state line between Georgia and Tennessee, there is practically no damage; that beyond that distance there is no perceptible injury either to crops or timber, and that there is no perceptible injury whatever in Union County, Georgia. Affiant further state that the public roads in the State of Georgia, particularly in Union County, are not in any manner injured nor interfered with by the operations of said copper industries, and that said roads are now as good as if not better than they have ever been, and further, that the smoke and gases from said works are not injurious to the health of the people of said county, but on the contrary the health of the community alleged to be affected in said county is as good now if not better than it has ever been before.

CHAS. W. GRIFFIES.	B. L. MCBEE.
W. A. TURNER.	A. L. TEAGUE.
J. T. DYRE.	W. H. JACKSON.
L. C. CHASTAIN.	E. WOODY.
J. W. HILTON.	W. E. DEAN.
T. C. HELTON.	W. J. RIDER.
M. C. HELTON.	E. W. CHAPMAN.
J. T. CEALLEY.	W .T. MAFFEY.
W. P. SEGROVES.	I. L. PATTERSON.
J. A. HALLBROOK.	G. D. TANNER.
J. P. CEWSLEY.	M. L. ODOM.
G. J. JACKSON.	J. C. TURNER.

A. P. KINCAID.	W. F. DONALDSON.
J. E. MORGAN.	J. R. VILES.
T. S. DONALDSON.	A. JORDAN.
W. P. BALHER.	T. M. GILLESPIE.
J. O. RIDER.	J. C. FORTENBERRY.
J. W. GALLOWAY.	L. F. TURNER.
J. G. BUTT.	H. A. HALBROOKE.
J. A. THOMASON.	R. N. DONALDSON.
G. L. PALMER.	Z. V. ROGERS.
J. M. NIX.	M. G. COBB.
J. N. NIX.	BEERLY COBB.
M. VOILES.	

Sworn to and subscribed before me this November 11th, 1905.

[SEAL.] G. G. HYATT,
Notary Public.

Affidavit of Citizens of Murray County, Ga.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF GEORGIA, }
Murray County. }

Personally appeared before me the undersigned authority, the witnesses whose names are hereunto subscribed, who being first duly sworn herein on their oaths did say: That they and each of them are residents and citizens of Murray County, State

of Georgia, that they are acquainted with the conditions of the timber, crops and vegetation in the northern part of the State of Georgia, and particularly in said county. Further, they say that the injury as alleged to the northern part of the State of Georgia as being the results of the copper operations at Ducktown, Tennessee, is greatly exaggerated; that there is no perceptible injury whatever either to crops or timber in Murray County, Georgia.

Affiants further state that the public roads in the State of Georgia, and particularly in Murray County, are not in any manner injured nor interfered with by the operations from said copper industries, and that said roads are now as good as, if not better than they have ever been, and further, that the smoke and gases from said works are not injurious to the health of the people of said county, but on the contrary the health of the community alleged to be affected in said county is as good now if not better than it has ever been before.

J. W. SPENILL.	R. C. LOGAN, SR.
W. M. CRAIN.	R. C. LOGAN, JR.
D. W. BOND, J. P.	G. W. ADAMS.
J. J. STOKES.	M. A. BALLEW.
S. F. CHAPMAN.	J. D. CARNES.
J. M. MORELAND.	B. H. TYLER.
JOHN C. MCINTIRE.	K. A. BELLEW.
W. R. COFFEY.	D. C. HARVEY.
J. A. COFFEY.	T. A. CANTRELL.
W. O. COFFEY.	J. M. HOLDEN.
J. W. COFFEY.	THOS. J. TYSON.
J. B. SPRINGFIELD.	W. T. BRINKLEY.

Sworn to and subscribed before me this November the 10th day, 1905.

I have no seal as none is required under the laws of Georgia.

W. R. TYSON,

Notary Public and J. P. for Murray County, Georgia.

Affidavit of C. L. Hensley.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE, *Knox County.*

Personally appeared before me, the undersigned, authority, a Notary Public in and for Knox County, Tennessee, C. L. Hensley, who being first duly sworn herein upon his oath did say: That he is 76 years of age, that he was a captain of cavalry in the Federal Army in the War of Secession, and has been a Justice of the Peace in Polk County, Tennessee, for twenty-seven years; that he has lived in or near Ducktown, Tennessee, since from the year 1866 until January, 1901, when he removed from Polk County, Tennessee, to Fannin County, Georgia, where for five years he resided at a point about two and one-half miles east of Morganton, in Fannin County, Georgia, and about five miles from the line between Fannin County and Union County, Georgia, and about ten miles on an air line from the copper operations in Polk County, Tennessee, and that during these five years he was often in Union County, Georgia, and is acquainted with the conditions there existing. Affiant further states that while living in Fannin County, Georgia, within ten miles on an air line from the copper works in Polk County, Tennessee, he made his living at farming. Affiant further states that he is acquainted with the timber, crops, or-

chards and other vegetation in Fannin and Union Counties, Georgia, and that the timber, crops, orchards and other vegetation are not injured nor impaired in that section of Fannin County, Georgia, wherein affiant lived nor were they injured or impaired in Union County, Georgia; that at the place where affiant lived in Fannin County, Goergia, affiant never detected the odor of the smoke, and affiant further says that he is acquainted with the public health of the community wherein he lived, and that said smoke had never injured the public health of that community, that the smoke and fumes from the copper operations of Ducktown do not deprive the citizens of Georgia of pure air and sunlight, and that it is not injurious to health, and further that he is acquainted with the public roads of the counties of Fannin and Union, in the State of Georgia, and that the public roads of these two counties are neither injured nor impaired nor obstructed nor interfered with by the operations of the copper industries in Polk County, Tennessee. The country in Fannin and Union Counties is a rough mountainous country, the soil is generally thin and poor, and the roads are the ordinary rough mountain roads, which are common to such regions. Affiant further says from his own knowledge that the roads of that section are as good now as they have ever been and that there is no more washing than is usual with such roads.

Affiant further states that he removed himself and his family from the point near Morganton, in Fannin County, above mentioned, back to Polk County, Tennessee, on October 16th, 1905, since which time he has resided at Ducktown, Tennessee.

Affiant further states that it is not true that the smoke or fumes from said operations are discharged over a territory within the State of Georgia for a radious of fifty miles or more, but states that on the contrary the effects of said fumes, smoke, etc., is confined to a very limited territory immediately adjacent to the

works of the two companies and that the larger part of the territory subjected to the effects of said fumes consists of land owned by one or the other of said two companies.

Affiant further states that there has been no depreciation of land in Fannin County, Georgia, on account of the copper operations at Ducktown, Tennessee, with the exception of a few farms lying adjacent to the state line and within a distance of a mile or such a matter from the copper operations at Ducktown, Tenn., and that on the contrary the prices of real estate in Fannin County, Georgia, have advanced to this affiant's personal knowledge within the last ten years, and that particularly at the point near the state line land for building purposes has advanced to such an extent that the advance has been much greater than the depreciation by reason of the smoke from the copper operations.

Affiant further states that during the operations of the copper industry prior to the year 1879 he was engaged as a contractor furnishing charcoal to the copper companies then operating and that for eleven years he was so engaged, working from thirty to forty men cutting wood, and burning the same into charcoal and delivering the charcoal to the copper companies at that time operated by Captain J. E. Raht, and affiant states that his contracts averaged during the eleven years from fifty thousand bushels per annum to one hundred thousand bushels per annum; that aside from himself there were engaged as contractors, furnishing charcoal, E. M. Kilpatrick, Penn Jones, Bobbie White, Harve McCay, E. C. Hunter and numerous other men, all employing laborers and all cutting wook and burning same into charcoal and that in this work the timber for miles around was cut from the land; that since that time the new growth which has sprung up has been cut and sold either to the copper companies or to families for use as cord wood.

Affiant further states that his residence at Ducktown, Tenn.,

was within half a mile of one of the roast yards and within one mile of one of the smelters during the time of the copper operations, and that during that time he raised a family of seven sons and three daughters, and that this affiant never in his life took a dose of medicine and never paid a doctor's bill for himself or for his family; and that he and his family were as much exposed, if not more greatly exposed to the copper fumes and gases complained of than were the inhabitants of the surrounding territory.

Affiant further states that he was present in Ducktown during what is commonly termed the "period of suspension" when the copper operations ceased in the year 1879. There was no railroad running into Ducktown, and the nearest point where men could obtain employment was sixty-four miles; that he saw the depopulation of the mining district of Ducktown and he personally saw hundreds of the inhabitants unable to obtain conveyances carrying their personal effects that they could take with them, and walking out of the country. Affiant saw one family with such household effects as it could take out upon the back of a cow, the smallest child riding on top of the bundle thus carried, and the entire family walked out of the district.

Affiant has read the affidavit made in this case by Gordan G. Hyatt and is acquainted with its contents, and knows that the same is true, and that the statements therein made are not exaggerated.

Affiant further states that at his home while he lived in Georgia at a point about ten miles on an air line from the operations at Ducktown, he never detected the odor of sulphur smoke, and further that there was in that neighborhood injury to neither the inhabitants nor to the vegetation, that the crops were as good as they had ever been, that the roads were not interfered with, nor obstructed in the slightest manner, that the washing complained of did not exist and that there was a general increase in the value

of real estate. To affiant's own knowledge a farm which had been worth $125 about the year 1899, was sold for $600 during the year 1904, and that upon this farm there had been improvements made to the extent of only seventy-five dollars. Affiant further states that the operations of the copper companies have never been moved from their point of original location, and that the plants of the two copper companies are now at the same point and the same location as where they were originally erected in 1891 and 1899 respectively.

Affiant is not interested in any manner whatever in the litigation in this cause except as a member of the community which will be affected by the result of this litigation.

Affiant further states that the conditions as they exist today are condiions of prosperity throughout the community adjacent to the mining operations, and affiant states that the general benefits derived by all of the citizens in the community for a great distance from the seat of the mining operations is greatly in excess of the injury caused. Affiant further states that the values of land have largely increased rather than depreciated. The free schools, which practically did not exist prior to 1890, are now in a thriving condition, holding open sessions for nine months during the year, there being eleven such schools in the Eighth District of Polk County, that being the district within which said mining operations are conducted, and said schools have an enrollment of 1,700. Throughout the mining district there are from 23 to 25 schools with an enrollment of about 2,500 pupils.

Aside from the direct benefit derived by the employes of these two copper companies there are benefits derived by the farmers living in the territory adjacent to the copper mining region by reason of there being a market for their products, and the benefits derived by the laboring classes generally who do work outside of the actual mining and treatment of the ores. Mer-

chants who have gone into business on the strength of the operations have prospered and there is a general condition of prosperity throughout the community. Affiant further says that this prosperity is attributable to the copper industry at Ducktown, Tenn.

And further saith not.

CALVIN L. HENSLEY.

Subscribed and sworn to before me on this November 11th, 1905.

[SEAL] EDWARD HACKER,
Notary Public, Knox County, Tennessee.

Affidavit of George Cromwell.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF NEW YORK,
County and City of New York.

Personally appeared before the undersigned authority, George Cromwell, who being duly sworn herein on oath, says that he is a citizen and resident of the County of Richmond, State of New York, and that he holds the official position of President of the Borough of Richmond, City of New York, which Borough is co-extensive with the County of Richmond above referred to, and that he has resided in the above county

for the last twenty years and that he has been President of the Borough of Richmond for the past seven years.

Affiant further states that he was aware of the conditions existing in the County of Richmond and on the waters of the Kill von Kull and neighborhood due to the smoke from the works of the Orford Copper Company previous to the year 1901 and of the complaints arising thereto, both from the inhabitants of Richmond County and from the shipping interests in and around New York Harbor; that he was particularly cognizant of this last condition by reason of his having been interested in a certain collision case in which the smoke from the works of the said Orford Copper Company prevented the respective vessels seeing each other.

Affiant further states that about the year 1900, the local board of the Borough of Richmond, of which he was at that time president, took cognizance of the complaints made regarding the smoke from the said Orford Copper Works, which smoke was then discharged from certain low chimneys connected with the furnaces; that the matter was fully investigated and complaints made to the authorities of Bayonne and to the Orford Copper Works, which representations and protests together with those from other individuals and corporate bodies resulted in the building of a 365 feet stack.

Affiant further states that there have been no complaints since the building of the aforesaid stack and that from his official position if there were any complaints he believes he would be apprised of them, and he is of the opinion that by the building of the aforesaid 365 feet stack the gases produced from the smelting of the coper ore of the Orford Copper Works are discharged so high above the level of the ground that they are diluted by the air to the extent that when they reach the ground they are practically invisible and produce no appreciable effect either upon vegetation or animal life and he is of the opinion

that the building of the aforesaid stack has been the means of entirely satisfying all previous complaints.

GEORGE CROMWELL.

Sworn and subscribed to before me this 21st day of November, 1905.

[SEAL] ERNEST W. BROWN,
Notary Public, New York County.

Affidavit of Robert R. Maffett.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

} No. 13.

STATE OF NEW JERSEY, }
Bayonne. }

Personally appeared before the undersigned authority, Robert R. Maffett, who being duly sworn herein on oath, says that he is a citizen and resident of Bayonne, Hudson County, State of New Jersey, and that he is the Superintendent of the Orford Copper Company, a concern operating a copper smelting plant at Bayonne on the New Jersey shores of the Kill von Kull, which body of water is the dividing line between the states of New Jersey and New York, and that he has filled the position of Assistant Superintendent and Superintendent of the above works for about nine years continuously; that previous to the year 1900 his company treated ores in various kinds of furnaces and roasters, each one of which was provided with a short stack not exceeding in height 75 feet above the level of

the waters of New York Harbor, and that these furnaces discharged into the air large quantities of sulphuric dioxide; that at about and previous to this time complaints were made by the inhabitants of the county of Richmond in the State of New York, his works as hereinbefore stated being in the State of New Jersey, on account of the alleged hurtful effects of the gases emanating from said furnaces, and also complaint was made by the shipping interests in and around New York that the gases and smoke emanating from the furnaces interfered with the proper navigation of New York Harbor and the adjacent waters thereto. After carefully investigating the matter the Orford Copper Company concluded that the proper method of abating the so-called nuisance was by the building of a tall stack or chimney and that for this purpose they caused to be built a stack or chimney, the top of which is 365 feet above the foundation thereof and that said stack has been built and in operation since about August 1st, 1901. The effect has been that the smoke and gases delivered from the top of said stack are taken by the winds and so diluted with the air before they reach the earth that any injury or effect of the gas is imperceptible, and so far as this affiant is informed and believes there is no complaint in respect to any alleged injury from the present use of said tall stack. The affiant has been informed with regard to the proposed stack which the Tennessee Copper Company now has in the course of erection and affiant believes from his own experience and observation that the building of said tall stack, which affiant is informed will be about 325 feet in height above its foundation or 415 feet above the drainage level of the country, will prevent any appreciable injury to the vegetation of the surrounding country.

ROBERT R MAFFETT.

Subscribed and sworn to before me this 10th day of November, 1905.

[SEAL] CHAS. E. ANNETT,

Notary Public, State of New Jersey.

Affidavit of Otto R. Jaecker.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF NEW YORK,
County and City of New York.

Personally appeared before the undersigned authority, Otto R. Jaecker, who being duly sworn herein on oath, says that he is a citizen of Chemnitz, Saxony, German Empire; that he is a civil engineer and a graduate of the Royal Technical Institute of Chemnitz; that for the last fifteen years he has been engaged in the designing and building of chimneys or stacks for industrial, chemical and smelting works; that in addition to the above occupation he has kept himself thoroughly informed as to the state of the art in this particular branch of engineering, and in addition to designing and building stacks himself in Germany and the United States has also inspected and observed all important similar constructions as made by other firms and individuals; that he is well acquainted with and has thoroughly studied the requirements of the Prussian and Saxony governments regarding the heights to which stacks of chemical and metallurgical works are to be built with the idea of preventing the gases given off from such works doing damage either to animal or vegetable life. Affiant further states that from his knowledge and experience he believes that the regulations of these two governments are the most severe

and exacting and have been formulated after most careful investigation and study of the subject.

Affiant further states that he was called in consultation by the Tennessee Copper Company, he representing the firm of H. R. Heinicke, Incorporated, having an office at 160 Fifth Avenue, New York City, and that he visited the works of the Tennessee Copper Company, located near Isabella Junction, Tennessee, about the 15th of November, 1904, and remained there for a period of five days studying the local conditions at their smelting works; that at the time of his visit he found they were operating three blast furnaces, which said three furnaces were connected with a small brick stack located back of the smelting works, but that this stack, on account of its insufficient size, was unable to take care of the gases coming from the furnaces and that therefore about one-half of the gas generated in the operation of the furnaces was being discharged from the very tops of the furnaces themselves, which was a little below even the base of the small brick stack previously referred to. Affiant further states that he made chemical and physical tests of the gases given off by the furnaces, calculations as to their volume and as to the probable volume which would be given off if the present plant and its proposed addition of four more furnaces were in operation; that he viewed the surrounding country and from his inspection of the same and also from his inspection of the maps of the Geological Survey acquainted himself with the topography of the country in the State of Georgia south of the smelting works of the Tennessee Copper Company; that after the above investigation affiant then made calculations as to the size and height of chimney or stack which it would be necessary to build in order to discharge the gases from the Tennessee Copper Company's smelting plant at such a height that they would be so diluted with air that upon reaching the ground they would be incapable of

doing any appreciable damage to animal or vegetable life, assuming as a basis, as originally stated, the regulations of the Prussian and Saxony governments; at that time affiant calculated that a stack located with its base close to the old stack would require to be 300 feet high above the base of the stack, but that later on for constructive purposes it was concluded to move the stack a little to the west of the original position where the base would be lowered and therefore the stack height was increased to 325 feet. Affiant further states that the stack is at the present time completed and in operation, and from reports received is fulfilling to the greatest extent the calculations and expectations of this affiant made with the view of relieving any possible grounds for complaint.

OTTO R. JAECKER.

Subscribed and sworn to before me this 13th day of April, 1906.

[SEAL] ERNEST W. BROWN,

Notary Public New York County.

Affidavit of W. R. Rust.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF WASHINGTON, }
County of Pierce. }

W. R. Rust, being first duly sworn, on his oath, deposes and says:

I am the General Manager of the Tacoma Smelting Company, located near Tacoma, Washington, and that I have had charge of said smelter since March, 1890, and that I have been a resident of Tacoma continuously from that date to the present time; that the smelter has been engaged in smelting ore carrying a large percentage of sulphur, and that complaints have been made about the sulphur fumes by people living within a radius of three or four miles of the smelter; that the tonnage smelted at the Tacoma Smelter is constantly increasing, until we are now smelting about nine hundred tons per day. (Mostly sulphide copper ores.) As the amount of ore smelted increased, the complaints from the surrounding country became more frequent, and during the past two years we have been threatened with lawsuits, but, upon promising to build a high stack, which, we believed, would abate the smoke nuisance, no suits were commenced against us.

Our stack is located on a hill back of the smelter, the top of the foundation being one hundred and twenty-three feet

above the slag dump, and the stack is three hundred feet high above the foundation.

Since the smoke has been going through this stack we have had no complaints, whatever, in regard to the smoke nuisance, and I believe that carrying the smoke to this height, it will scatter over such a large area, and will be diluted to such an extent that it will cause no appreciable damage to surrounding vegetation, and it is my opinion and belief that the smoke nuisance can be abated by other smelters similarly situated, by the construction of high stacks.

W. R. RUST.

Subscribed and sworn to before me this 9th day of November, 1905.

[SEAL] F. W. CLARK,

Notary Public in and for the State of Washington, residing at Tacoma, Pierce County, Washington.

Affidavit of John Menzies.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE,
Knox County.

Personally appeared before me the undersigned authority a Notary Public in and for said State and County, John Menzies, who being first duly sworn, herein, on his oath did say:

That he is connected with the Freight Department of the Louisville and Nashville Railroad Company, at Knoxville, Tennessee; that at the request of counsel for defendant Tennessee Copper Company a statement was obtained by affiant's office from the office of the Auditor of Receipts of the Louisville & Nashville Railroad Company, at Louisville, Kentucky, showing the earnings on freight forwarded from and freight received at the stations of Isabella, Ducktown and McCays on the line of the Louisville & Nashville Railroad in Polk county, Tennessee, said three stations being all within what is commonly known as the Ducktown Mining District. The original of said statement is herewth filed as Exhibit "A" to this affidavit. Said statement shows receipts from freights forwarded and freight received amounting to $277,190.89 from these three stations. The total receipts from the other eighty-one freight stations on the Atlanta, Knoxville & Northern Division of the

Louisville & Nashville Railroad amount in the aggregate for the same period, to $1,072,529.47, which amount includes Knoxville and Atlanta, amounting to $636,755.40.

JOHN MENZIES.

Subscribed and sworn to before me on this November 23rd, 1905.

[SEAL] EDWARD HACKER,
Notary Public, Knox County, Tennessee.

Exhibit "A" Affidavit of John Menzies.

LOUISVILLE & NASHVILLE RAILROAD COMPANY.

Office of the Auditor of Receipts.
Louisville, Ky., November 18th, 1905.

STATEMENT.

Statement showing freight received and freight forwarded by months to and from Ducktown, Isabella and McCays, Tenn., from January 1st to September 3d inc., 1905:

	Isabella		Ducktown		McCays	
	Frt. Fwd	Frt. Rec'd	Frt. Fwd	Frt. Rec'd	Frt. Fwd	Frt. Rec'd
January	$ 6,779.45	$ 9,900.55	$ 135.30	$ 538.62	$201.86	$ 671.34
February	7,479.75	11,126.92	74.10	574.06	11.38	490.56
March	11,251.39	12,541.14	272.81	614.06	20.82	648.72
April	11,565.59	15,205.57	331.77	573.72	17.83	740.41
May	10,080.03	16,910.55	140.83	483.61	27.37	783.47
June	17,749.42	14,727.60	23.94	538.56	36.09	691.28
July	19,521.72	16,898.66	176.05	182.59	31.81	661.74
August	23,113.01	17,223.51	221.38	634.76	53.86	57.13
September	19,276.56	16,264.55	155.32	674.38	100.77	952.62
Total	$126,796.92	$130,799.05	$1,531.50	$10,864.36	$501.79	$6,697.27

GEO. BECKER, A. R.

To MR. C. D. BOYD, G. F. A.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE, *Knox County.*

Personally appeared before me, the undersigned, a Notary Public in and for Knox County, State of Tennessee, G. C. Parks and M. T. Fouts, with each of whom I am personally acquainted, and who upon their oaths did say:

That they and each of them are citizens and residents of Polk County, Tennessee; that the said G. C. Parks is at this time and has been for some years past the Judge of the County Court of Polk County, Tennessee; that he has resided in Polk County, Tennessee, for fifty years; that the said M. T. Fouts has resided in Polk County, Tennessee for about 55 years and has represented Polk, Bradley, Loudon and Monroe Counties in the Lower House of the Legislature of Tennessee, and has represented Polk, Bradley, James, Meigs, McMinn and Monroe Counties in the State Senate of Tennessee; that said affiants and each of them state that they have made a particular study of the physical condition in and adjacent to the Ducktown Mining District since May, 1901; that during the five years since said date they have made many trips over, through and around said territory, covering particularly Polk County, Tennessee, Cherokee County, North Carolina and Fannin County, Georgia, and that these various trips were made

for the purpose of examining and determining the extent of injury, if any, done by the sulphur fumes from the Ducktown copper operations to the vegetation and timber in the territory above mentioned. Incident to this examination of the general conditions prevailing these two affiants in September, 1904, made an extensive examination of the territory surrounding Ducktown at a distance beyond the point where there was the slightest trace of fumes. The purpose of this examination in 1904 was to determine the relative condition of timber in the section of country simlar to the country adjacent to Ducktown where similar geological and forestry conditions prevailed. On that trip in 1904 these affiants started from a point near the center of Polk County, and went then westwardly, passing through the town of Cleveland, in Bradley County, Tennessee; thence still westwardly through James County, and thence over through Harrison in Hamilton county, Tennessee; thence in a northwestwardly direction through Rhea county, Tennessee, and thence into Bledsoe County, Tennessee, and through Bledsoe County to and through Sequatchie County, Tennessee, and thence through Walker County, Georgia, thence through Catoosee County, Georgia, thence through Whitfield County, Georgia; thence through Murray County, thence through Gordan County, thence through Gilmer County, Georgia, and thence through Fannin and Union Counties, Georgia, and thence through Cherokee County, North Carolina, back into Polk County, Tennessee, at Ducktown. This trip was made for the particular purpose of comparing the conditions existing as aforesaid outside of any possible zone of injury with the conditions existing in the alleged zone of injury, and on portions of this trip these affiants were at distances of from seventy-five to one hundred miles from Ducktown in Polk County, Tennessee. During this trip, from the time of starting until these affiants returned into the immediate Ducktown district there

was absolutely no injury, the first injury seen being at a distance of not exceeding four miles from Ducktown in Cherokee County, North Carolina, in what is known as the Angelico Gap. Affiants in making said trip carried note books and made notes of the conditions as found.

In Polk County, Tennessee, West of Frog Mountain, there was no apparent injury. In Bradley County, where there has never been any claim that there was any smoke injury, and where no one for a moment would contend that there could be any possible injury from smoke, it was found that the chestnut and chestnut oak and pine timber were dead and dying. Affiants inquired to ascertain the probable cause of the injury done to this timber, and were informed that the condition of the timber was due to worms or to improvident cutting of the timber. Opinions differed among the people as to what was the cause of the injury, but none of them attributed the injury to the smoke. Upon inquiry it was found that the injured condition of the timber had existed for more than fifty years. It was learned upon inquiry of the oldest inhabitants that the chestnut timber which many years ago had been cut had gradually deteriorated until now there is practically no chestnut timber in that country. West of Cleveland in Bradley County, Tennessee, on White Oak Mountain, the same conditions prevailed and the same causes were assigned as before. On Walden's Ridge, further away from Ducktown, and at a distance of about seventy-five miles West of Ducktown, the timber was in worse condition than it had been found in Bradley County, or at any of the intermediate points. At this point on Walden's Ridge affiants travelled for approximately thirty-five miles through nothing but timber and these same conditions were found to prevail throughout that territory. Careful note was taken of the condition of this timber and it was ascertained that the percentage of injured timber was greater at that distance than at any point

in the territory adjacent to Ducktown with the exception of the timber in the immediate vicinity of the Smelter plant. The same conditions of injury prevailed on Cumberland Mountain at a still greater distance than Walden's Ridge from Ducktown. From the Cumberland Plateau affiants went in a southeasterly direction, crossing the state line between Tennessee and Georgia near Chattanooga, and in passing went through the Chickamauga National Park, near Chattanooga. These same conditions of dead and injured timber existed even after affiants passed through said National Park in Walker County, Georgia, but within said National Park, in Walker County, Georgia, said conditions did not exist from the fact that the timber is cared for and there are no forest fires, the dead wood is cut out and removed, and diseases and insects are not allowed to breed or become disseminated throughout the living timber. This National Park consists of several thousand acres, the exact acreage being to affiants unknown, but in traveling through said Park affiants traveled six or seven miles.

In Walker County, Georgia, after passing through said National Park the same conditions of diseased and dying timber were noticed as had been noted prior to the entry of affiants into said National Park. These conditions prevailed throughout Walker County, Georgia, and also in Catoosee County, Georgia.

From Catoosee County, Georgia, affiants went into Whitfield County, Georgia, and thence into and through Murray, Gordan, Gilmer and Fannin Counties, Georgia, and thence into Union County, Georgia. At points nearer Ducktown the conditions prevailing were ascertained to be no worse than the conditions where they had travelled on the Cumberland Plateau and Walden's Ridge. So that the conditions existing could not have been in any sense attributable to the smoke from the Ducktown mines. Affiants enquired throughout this trip of the

inhabtants of the territory covered as to the causes of injury. Observations were made with respect to fires in the forest, and it was ascertained that throughout the region forest fires had prevailed, injuring the humus and forest floor covering, injuring the small growth, and affecting more or less seriously the timber in all of its stages, even the larger trees being seriously affected by the fire in the under growth or foliage and litter on the ground.

To the knowledge of these affiants the methods of cutting timber prevailed in this section examined are so lax, the dead tops and limbs being allowed to lie untouched and rot upon the ground, breeding insects and inviting forest fires, that great injury is done to the living timber. This condition has prevailed for years and is now prevailing throughout that territory. On the return trip into Ducktown these affiants took particular notices of the orchards and crops. The finest apples seen on the trip were in Gilmer, Union and Fannin Counties, Georgia and in Cherokee County, North Carolina, and were in marvellously fine condition. The trees were loaded with apples. The apples were matured and were being gathered. The apples were the finest these affiants had ever seen and the quantities were beyond belief. This condition as above stated existed within the territory alleged in the bill in this cause to have been completely ruined.

Just before making this affidavit affiants returned from a trip of inspection over a part of the territory covered and examined in the trip of 1904. This recent trip was made by these affiants at the request of the Tennessee Copper Company, and for the purpose of making a comparison of the conditions now existing with those existing in 1904 on the trip above outlined. On this recent trip these affiants went from Polk County, Tennessee, to Ellijay, Georgia, and there took conveyance and drove over and along the public roads of North

Georgia in Gilmer and Fannin Counties, making note of the conditions existing as compared with the conditions existing in 1904. The timber conditions found to exist on this trip were similar and no change can be noticed in Gilmer and Fannin Counties, Georgia, with the exception of that part of Fannin County next to the Ducktown district.

The orchards of peaches, pears and plums were in as good condition as they had been in 1904. They were found to be in full bloom and in good, healthy thriving condition. The apple orchards had every appearance of being healthy, green and thriving. The leaves were starting out and there were no conditions which could be detected which were different from the conditions prevailing on the inspection of 1904 as to the condition of the timber and orchards themselves.

Affiants noticed particularly the public roads which were found to be in as good or better condition than roads of similar mountainous sections at a distance wholly outside of the territory where there has been even any alleged injury. The atmosphere was clean, pure and healthy. There was no discomfort on the public roads and there was no condition whatever of either discomfort or unhealthfulness to be observed.

Such of the crops as had come up, the grasses, rye and oats, were in as good or better condition than they were anywhere within fifty miles north or west of there.

While on this trip affiants saw forest fires burning in the mountains near Ellijay and on the roads saw many evidences of forest fires in passing through the sections where the fires were burning and through sections which had been recently burned. These forest fires are very prevalent in that section of country and undoubtedly have an injurious effect upon timber and woodlands. These forest fires are due to the negligence or carelessness of the people, burning off the litter upon the

ground and the forest floor and not only injuring the larger trees but killing a very large per cent of the small growth.

On this trip these affiants saw the effects of the fires which had destroyed well grown pine trees, and saw where the fire had mounted into the crowns of the trees for from thirty to forty feet, and these affiants from their experience and from the examinations they have made all over the territory attribute to a very large degree the injury done to the timber complained of in a great many instances to forest fires.

On this recent trip these affiants saw the new tall stack of the Tennessee Copper Company in operation, with smoke emanating from the top of the stack, and affiants observed said smoke and noticed that after leaving the stack the smoke went high into the atmosphere above the top of the stack before it began to drift away, and then drifted in a northerly direction disseminating with the atmosphere as it progressed. From the observation of said stack, and based on the observations which these affiants have made during said period of five years, it is the firm belief of these affiants that said stack will remedy the conditions complained of, and that by the tme the smoke emanating from said stack shall reach the earth again it will have become so diluted with atmosphere that the injury therefrom, if any, will be imperceptible.

During the recent trip above mentioned these affiants talked to many of the inhabitants of North Georgia and heard no complaints whatever with respect to any injury at the present time. On the contrary these affiants heard many expressions by citizens and residents of North Georgia in which those citizens stated that they were not now being injured, and that the Ducktown copper operations had been of the most positive benefit to them and their neighbors. The only complaints heard were those of Shippen Bros., lumber operators, at Ellijay.

These affiants interviewed Mr. Frank Shippen, who was the only person seen by these affiants who was making any question on the present conditions existing, and who in connection with other members of Shippen Bros. Lumber Company, so far as these affiants could ascertain upon inquiry, were the only citizens of North Georgia taking any active interest in this litigation. Mr. Frank Shippen admitted to these affiants that he had fine orchards which were apparently in excellent condition. His only complaint was that two years ago, that is, during the season of 1904, some of the fruit rotted upon the trees. That condition, however, to the knowledge of these affiants might be attributable to any one of a number of causes. It is a well known fact that in that region the fruit trees do not yield uniformly. During some seasons the crops will be fine and flourishing, and during other seasons without any apparent cause whatever the crops will be total failures, and this is true not only of that particular territory but of territory wholly outside of the territory which could by any means be alleged to be injured by the smoke.

In Ellijay it was stated that the motive of Shippen Bros. for endeavoring to interfere with the mining operations was in order that they might obtain labor at less wages than they now are compelled to pay.

G. C. PARKS.
M. T. FOUTS.

Subscribed and sworn to before me on this April 10th, 1906.

[SEAL] EDWARD HACKER.
Notary Public Knox County, Tenn.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me, the undersigned authority, the witnesses whose names are hereunto subscribed, who being first duly sworn herein, on their oaths did say:

That they and each of them are residents and citizens of what is known as the Ducktown Mining District, in Polk County, Tennessee, and Fannin County, Georgia; that they are acquainted with the operations of the Tennessee Copper Company; that they have been residents of said district since the time when the open heap roast method was in use by the copper companies operating in the Ducktown district; that said open heap roasting process has been abandoned by the copper companies so operating and that the method of operation at the present time is by smelting the green ore, so that the smoke therefrom issues through a tall stack now in use; that said tall stack of the Tennessee Copper Company is about 325 feet in heighth above its foundation, which rests on the crest of a high hill; that since the smoke has been issuing through said tall stack they believe that there has been and cannot be any injury to vegetation or animal life.

These affiants are acquainted with the health of the communities in and adjacent to the Ducktown Mining District, and to

the personal knowledge of these affiants the health of said communities is in no wise affected by the copper fumes from the operations of said copper industries.

These affiants are acquainted with the public roads of the Ducktown district, and of the territory adjacent thereto, and to the personal knowledge of these affiants said public roads are not and cannot be injured or impaired by said gases and fumes.

It is not true that the pure air and sunlight is interfered with, nor is it true that the public roads are made uncomfortable or dangerous, nor are they in any manner injuriously or harmfully affected.

These affiants are acquainted with the streams in and adjacent to the Ducktown mining district, and these affiants state of their own knowledge that said streams are not impaired nor interfered with, with the exception of a limited territory on property belonging to one or the other of the mining companies, there has been little or no washing of the soil in the past. There is none at present unless it be in the immediate vicinity of the old roast yards, which property belongs to the Tennessee Copper Company, and which washing at present is due to operations which were had many years ago and which are now abandoned.

Prior to the installation of the present process of smelting these ores and when the process was to first roast the ores in open heaps there was considerable complaint that the fumes generated from such roasting would spread out over the adjacent territory and injure vegetation. At that time it was not thought that these fumes would be in the slightest injurious to health.

When the defendant companies some two years ago abandoned its old method of open heap roasting and adopted the present method of smelting green ores in the furnaces practically all complaints as to injury from gases and fumes ceased. In fact, there was no such injury except at occasional intervals, which in-

jury was caused by the fact that the fumes from the smelters passed out of the ordinary chimneys or smoke stacks, and in some kinds of weather they would reach the ground before being sufficiently diluted with the atmosphere to prevent their doing damage, and occasionally there were complaints of injury being done from such fumes; but quite recently the Tennessee Copper Company completed its tall chimney or stack, above referred to, and turned said smoke through said tall chimney, since which time the same have been carried up to a great height in the air before being so thrown out, and at the present time in all conditions of the weather said fumes are so thoroughly diluted with the air before reaching the ground that we believe that absolutely no injury to animal or vegetable life can result even in the immediate vicinity of the smelters, the same being in our opinion rendered entirely harmless.

After the defendant companies abandoned the open heap roasting method and commenced the method of green ore smelting the atmosphere was so cleared up and the damage done by the smoke was so minimized that vegetation took on a new growth and the inhabitants of the towns in the immediate vicinity of these works were able to have beautiful lawns and gardens, as productive as possible for gardens to be in a locality where the land is naturally so poor and unfit even prior to the placing in operation of said high stack, for agricultural purposes, that the said damage was so small as to be almost unappreciable and to produce little or no complaints even in the immediate locality of the works.

Affiants further state that the property surrounding the Ducktown Mining District for many miles consists of poor, sterile land, almost valueless for agricultural purposes; that the timber upon said land is very sparse and scrubby and is therefore unfit for any purpose other than cord wood; and that said land is not suitable for agricultural purposes and is fit for very little of any-

thing except for the purposes for which it is being used, that is, for mining purposes.

R. L. Hutchins.
J. M. Center.
H. A. Hudson.
J. E. Stephenson.
J. L. Patterson.
J. M. Bice.
J. C. Brown.
C. T. Shith.
Green Crumber.
W. D. Ammons.
W. M. Lambert.
W. B. Boergs.
I. W. Vaughn.
J. R. Hollan.
W. H. Barclay.
J. R. Harper.
A. B. Arp.
C. L. Barnes.
J. V. Henson.
S. A. D. Elliott
D. M. Fain.
C. J. McDonald
Wm. Postell.
J. R. Panter.
D. J. Kerr.
W. C. Tanner.
T. S. Harbison.
M. T. Jacobs.
R. H. Usry.
H. K. Taylor.
Wm. Morgan.
J. E. Winchester.
John R. Price.
Grant Standwitch.
J. M. Wilson.
E. S. Richards.
L. O. Smith.
I. A. Hamilton.
C. G. Patterson.
G. L. Balclay.
J. F. Griffin.
H. Quintrell.
R. A. Barclay.
J. F. Teague.
Dan Mahoney.
F. M. Hubbard.
J. A. Hampton.
C. F. Cutcher.
F. R. Calther.
W. M. Dukin.
C. G. Smith.
J. H. Wheeler.
L. J. Zibelin.
F. E. Hickey.
S. C. West.
P. Whelton.
M. J. Tissmer.
S. C. Gany.
Zum Connell.
H. L. Henson.

F. Kohlbecker.
A. D. Smith.
J. A. Hunter.
W. H. Farrell.
J. N. Peeples.
J. W. Starnes.
F. L. Kloss.
E. W. Chapman.
A. D. Angel.
M. H. Powell.
W. H. Anderson.
A. J. Carney.
Jas. McGough.
J. E. Harrison.
W. W. Mitchell.
E. W. Howell.
L. Custin.
M. P. O. Connor.
F. E. Garren.
J. H. Alexander.
J. E. Wilson.
D. P. McCarthy.
Chas. Butler.
J. C. Standridge.
R. H. Driscoll.
B. D. Boholin.
C. W. Jones.
L. Davis.
F. C. Perkins.
R. N. Donaldson.
H. F. Barclay.
A. H. Case.
C. E. Donald.
W. C. Oclom.
J. F. Jones.
O. H. Allen.
R. L. Price.
P. Collins.
J. M. Case.
H. T. Scroggs.
J. P. Ellis.
W. H. Eaves.
T. L. Campbell.
A. N. White.
L. Bell.
T. M. Fain.
J. E. Edwards.
D. S. Blackwell.
W. T. Foster.
J. M. Stevenson.
T. F. Starnes.
J. Kaylor.
J. B. Standifer.
W. W. Carmichael.
J. J. Carmichael.
L. Davidson.
J. W. Barnes.
B. P. Self.
D. A. Bishop.
F. M. Hopward.
O. G. Pardue.
B. Pack.
I. D. Housewright.
D. A. Bell.

M. H. Roberson.
J. I. Williams.
P. H. Davis.
I. A. Ammons.
J. E. Montgomery.
Z. L. Peterson.
Edwin G. Grisham.
J. M. Scroggs.
G. M. Falls.
T. J. T. Alley.
T. G. Parr.
E. J. Daniels.
J .C. Lewis.
J. D. Beaver.
Y. W. Smith.
W. C. Goode.
C. H. Carmichael.
W. E. O. Kelley.
J. M. Guyston.

Sworn to and subscribed before me this the 6th day of April, 1906.

[seal] H. M. Bramlett,
Justice of the Peace for Polk County, Tenn.

E. L. Greer.
W. B. Tudor.
G. W. Self.
A. J. Kell.
T. X. Mooney.
J. E. Adams.
P. H. Hubbard.
Lloyd T. Buell.
C. F. Culberson.
Roy A. Capps.
R. S. Partin.
E. B. Bruce.
W. L. Cross.
C. P. Chester.
T. H. Collins.
J. F. Brown.
L. V. Wilson.
W. F. Waldrup.
J. A. Mortin.
S. M. Hughes.
George Frenen.
M. A. Gang.
W. L. Griffin.
A. L. Bell.
W. F. Henry.
W. M. Pattison.
I. M. Stanley.
W. D. Hanthen.
C. Davidson.
A. B. Beaver.
Lich Ensley.
F. H. Huppman.
F. M. Huffman.
F. M. McFarland.

C. C. Forester.
L. G. Buice.
A. C. Parks.
H. L. Buice.
J. E. Mathews.
L. Hollifield.
G. L. Hampton.
J. R. Garrett.
James Garrett.
H. L. Bryant.
Sam Painter.
G. W. Faulley.
R. J. Cook.
N. G. Golden.
H. A. Sgelton.
W. A. Coats.
J. H. Cook.
W. P. Key.
Chas. E. Chilliam.
J. R. Wittebarger.
J. B. Miller.
W. T. Mahaffey.
L. Owen.
J. M. Garber.
R. M. Self.
R. L. Kell.
B. H. Case.
J. H. Patterson.
F. N. Williams.
W. H. Davenport.
J. C. Allen.
T. M. Golden.
T. R. McFarland.
R. M. Caylor.
W. M. Frasher.
Chas. Bell.
W. J. Hankins.
W. E. Mulkey.
J. C. Parris.
A. Bennett.
A. G. Barrett.
L. R. Derreberry.
W. S. Simpson.
E. H. Denney.
F. M. Weaver.
G. H. G. Whitworth.
J. L. Hopkins.
W. R. Garrison.
D. B. Beckler.
A. E. Allen.
G. W. Gaddis.
W. H. Guary.
G. W. Runnion.
A. Smith.
E. A. Riker.
W. L. Corbin.
L. N. Robinson.
W. S. Ward.
T. N. Messer.
R. L. Runion.
G. A. Barnes.
W. A. Breeden.
W. O. Clift.
M. Elrod.

N. C. Thomas.
W. J. Robinson.
H. W. Bell.
J. F. Ammons.
F. T. Ammons.
W. S. Patterson.
H. H. Queens.
Dan Quinn.
H. F. Chancey.
D. N. Hughes.

Sworn to and subscribed before me this 7th day of April, 1906.

[SEAL] H. M. Bramlett,
Justice of the Peace for Polk County, Tenn.

J. E. Smith.
B. C. Goode.
E. W. Curtis.
D. W. Ensley.
W. O. Weeks.
R. B. Gberd.
S. C. Ambern.
T. W. McGill.
I. E. Plemons.
W. A. Keener.
M. H. Cole.
F. P. Ferguson.
C. M. Briant.
J. E. Rollins.
C. W. Rider.
J. W. Bramlett.
J. B. Dishon.
R. P. Walker.
E. H. King.
W. C. Hall.
W. M. Walkey.
W. H. Hyatt.
J. A. Tarpley.
A. M. Laudermilk.
F. H. Morgan.
J. W. Gass.
W. M. Jones.
A. H. Ammons.
E. L. McConnell.
S. S. Mitchell.
L. A. Goode.
J. M. Stephens.
A. W. Anderson.
J. C. Padgett.
J. M. Bramlett.
J. T. Arnold.
R. L. Godfrey.
L. H. Reagan.
J. W. Raper.
J. W. Edwards.
John Edwards.
B. E. Watson.
J. L. Marlow.
A. A. Barclay.
Jas. F. McCay.
F. M. Jones.

ISAAC SOLSBEE.	G. JONES.
J. B. McCLURE.	W. M. WEBB.
J. C. STAGGS.	J. B. JONES.
W. L. BRAMLETT.	D. C. McCAY.

Sworn to and subscribed before me this the 9th of April, 1906.

[SEAL] H. M. BRAMLETT,
Justice of the Peace for Polk County, Tenn.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE, *Polk County*

Personally appeared before me, the undersigned, a Justice of the Peace in and for Polk County, Tennessee, Gordan G. Hyatt, who being first duly sworn hereon, on his oath did say: That he is forty years of age, and is a citizen and resident of Polk County, Tennessee, and is by profession a lawyer. Affiant was born in Polk County, Tennessee, and was raised within a distance of less than five miles from Ducktown, Tennessee, and is familiar with the copper operations in the Ducktown district, and is familiar with the territory of North Carolina, Georgia and Tennessee adjacent to said copper operations and has been familiar with said territory since his infancy. The

Ducktown basin, within which these operations are carried on, is at an altitude of about 1800 feet above sea level, and is surrounded by mountains which at points arise to an elevation above sea level of from two to four thousand feet. This basin is about eight miles in width and twelve miles long.

Affiant states that the lands and the entire territory contiguous to the mines is poor, thin and sterile soil, almost unfit for agricultural purposes, and in the whole region are very few farms that are capable of yielding enough corn, wheat and other cereals to carry their owners through the winter. The value of the district and territory aside from the value of some of the lands for grazing and pasturage, lies wholly and absolutely in its mineral worth, which predominates and is paramount to all other interests combined within a radius of fifty miles. Copper was discovered in the Ducktown district about the year 1849. Operations for copper were begun in 1850 and were carried on continuously, with a slight intermission during the civil war, until about 1879. During the period of operation hundreds of people were directly dependent upon the workings of the copper mines. The operations had been carried on by Captain J. E. Raht, who was later succeeded by E. G. Duvall, who for the Union Consolidated Mining Company continued operations until the year 1878 when that company suspended operations and went into the hands of a receiver, who continued the operations during the year 1879, and then ceased. Operations were begun by the Ducktown Sulphur, Copper & Iron Company (Limited) about the year 1891. The Pittsburg & Tennessee Copper Company began its operations about the year 1892, and continued until it was succeeded by the Tennessee Copper Company in 1899, which company, together with the Ducktown Sulphur, Copper & Iron Company, Limited, have been continuously operating until the present day.

When the Union Consolidated Mining Company suspended operations in 1879 there ensued one of the darkest periods ever known to the people of the adjacent territory, both in Georgia and Tennessee. Hundreds of people at that time had purchased homes, some of which had been paid for, and some of which were being paid for. When the mines were suspended there was no sort of employment for labor nearer than Ridge Valley, Ga., Soddy, Tennessee, and Dayton, Tennessee, the nearest point being sixty miles away and hundreds of people at the time being unable to get conveyances were forced to take their wives and children and walk through the country, seeking employment, taking with them such personal effects as they could carry upon their own backs. Hundreds of homes, which had been partly paid for, were lost. Hundreds of valuable residences and other buildings rotted down and went to waste. Furnaces, smelter plants and factories decayed and fell down, leaving their dismantled ruins as monuments of the desolation and destruction of a once thriving community. The period from 1879 to 1890 is now known and spoken of throughout the territory adjacent to these copper operations as "the period of suspension," and it is remembered and referred to by the inhabitants as a time when want and suffering were common to all the people. During that period there was no employment near Ducktown by which the people could earn money or by which the community could be supported. Practically the only money current among the people was the money paid to such of the inhabitants as drew pensions from the Federal government.

The land being poor and sterile and not being adapted to agricultural purposes the majority of the inhabitants remaining were unable to raise enough crops to provide themselves with food and forage for the winter, and those of the inhabitants

whose land was capable of raising a crop found no market where their produce could be sold for money. The majority of the inhabitants would make what is known in the mountains as a "one steer crop" that is such a crop as could be made with the assistance of one steer, grazing their steers upon the commons at the time, and after harvesting such crops as they could make would prepare food enough to last them through their journey, and leaving the country on foot would walk to Ridge Valley, Ga., Soddy, Tenn., or Dayton, Tenn., seeking employment in order that they might make enough money to pay their taxes and to meet such other little money obligations as had been incurred in the purchase of coffee, sugar and clothing for themselves and their families.

When the Ducktown Sulphur, Copper & Iron Company, Limited, commenced preparations for operations in the year 1890 the news became noised about among the inhabitants of the territory adjacent to the mining region, and was hailed with joy by all the people. To these people it meant the return of the days of prosperity, and from all the mountain regions for miles around people flocked into Ducktown, seeking employment until there has now grown up a thriving, prosperous, contented community where labor may find employment, where work is abundant and where want is unknown. To this affiant's knowledge there are no people in that community who are, or who need be, in the destitute condition which is usually found in other communities of its size. The Tennessee Copper Company and the Ducktown Sulphur, Copper & Iron Company, Limited, together pay about half of the taxes of Polk County, Tennessee. The schools, which prior to the year 1890 practically did not exist, have been greatly benefited and have been placed on a sound and safe basis. The children are receiving education which under the old regime was impossible.

The roads are better than they have ever been, and a general condition of prosperity prevails.

Affiant was Census Enumerator for the 7th, 8th and 10th Civil Districts of Polk County, Tennessee, for the Census of 1890, and as such Census Enumerator made up the figures for the Census of 1890. At that time there were in the entire mining region only 202 people, men, women and children. There are now, as this affiant is informed and believes, employed by the Tennessee Copper Company and the Ducktown Sulphur, Copper & Iron Company, Limited, jointly, about 2,500 men, and there is in the Ducktown basin, dependent almost entirely upon the copper operations, a population of approximately twelve thousand people.

Affiant is acquainted with the physical conditions in the states of North Carolina, Tennessee, and Georgia, adjacent to said copper operations, and has been so acquainted from his early childhood, and from affiant's own knowledge the injury alleged in the bill is grossly exaggerated. The public roads within the State of Georgia are neither injured, impaired, obstructed nor interfered with. Outside of a very short radius the farming lands and crops are as good as they have ever been.

During the time when the copper ores were treated by what was known as the "open heap process" affiant and his family lived within half a mile of one of the roast yards, and since the abandonment of that method within one mile of one of the smelters, so that he and his wife and children were and are subjected to the same smoke and gas influences as the other inhabitants of the community, and affiant states that neither he nor his family ever suffered any detrimental effects from said smoke or gases.

Affiant is acquainted with the general health of the community living adjacent to said operations and particularly that

part living in the northern part of the State of Georgia, where affiant has many relatives living in the section which is alleged to be injuriously affected by the smoke and gases complained of, and affiant states of his knowledge that there is no more healthy community than that of the territory alleged to be affected, and further, that to affiant's own knowledge the health of said communities is not and can not be injuriously affected by said gases and fumes, nor their vitality impaired, nor their peace and comfort interfered with.

Affiant further states that the timber in the territory adjacent to the Ducktown district does not consist of merchantable timber, but that it consists of small scrubby second growth timber. The original growth of timber for a distance of from eight to ten miles around in every direction was cut from the land during the operations in the Ducktown district prior to 1879. Said timber was then burned into charcoal and sold at the smelters of the copper companies then operating.

After operations were begun in 1890 the second growth of timber, which had sprung up, was cut from the land and sold as cord wood for use by the Ducktown Sulphur, Copper & Iron Company, and by the Tennessee Copper Company, in the open heap method then used. Vast quantities of the wood so cut have been and are being sold to the inhabitants of the Ducktown basin as domestic fire wood. Such small part of the timber as could be sawed has been cut into beams and boards and sold either to the inhabitants or to the mining companies for mining and building purposes.

Affiant further states that the injury to vegetation is within a very limited territory, being practically confined to the lands belonging to the Tennessee Copper Company which is the owner of approximately thirteen thousand (13,000) acres and the lands of the Ducktown Sulphur, Copper & Iron Company, Limited,

which company is the owner of about seven thousand (7,000) acres, and that outside of the boundaries owned by these companies there is little or no injury.

Affiant has read the bill in this cause and is acquainted with the allegations thereof, and in the practice of his profession affiant has occasion to go to numerous counties in East Tennessee, Western North Carolina and Northern Georgia, and is acquainted with the physical conditions for a distance of more than fifty miles in every direction from Ducktown, Tennessee; and affiant states of his own knowledge that it is not true that the fumes, smoke and gases from the copper operations are discharged for a radius of fifty miles around Ducktown, into Georgia, or in any other direction, and that it is not true that the discharge of such gases creates for that distance within the State of Georgia both a public and a private nuisance or that said gases deprive Georgia, or its inhabitants of sunlight, pure air, etc., or that said gases inflict upon the inhabitants of Georgia irreparable damage.

And affiant states of his own knowledge that it is not true that the smoke, fumes, gases and vapors, as alleged have destroyed over any considerable portion of the territory of Georgia within the counties aforesaid, all vegetation, crops, grasses, orchards, fruit trees, forest and other vegetation, and timber of the value of hundreds of thousands of dollars, or that the zone of destruction is growing under each month of the operation of said works; and affiant further states that it is not true that the accumulation of moisture is prevented as alleged, but shows on the contrary that the forest floor and sod are not affected for any appreciable distance. So that the natural springs and reservoirs are not injured and impaired, as alleged, and affiant further states that the fertile soil capable of producing vegetation, crops, fruit trees and other vegetation, is

not being washed away but is covered by grass; and affiant states that it is not true that the passage over or the safety and convenience of the highways within the State of Georgia are menaced or otherwise greatly damaged or rendered unsafe, dangerous or inconvenient by the smoke, vapors, fumes and gases, as alleged, but on the contrary affiant states that the roads of the northern part of the State of Georgia are in as good condition as they have ever been, and that there is no more washing than is customary and usual in mountain roads throughout the country; and affiant states that it is not true that the atmosphere is rendered noisome, foul or unwholesome, or that the health of the inhabitants has been or will be impaired; and affiant further states that it is not true that by the destruction of crops, orchards, etc., the citizens of Georgia have been deprived of means of livelihood by farming, or of pure air and sunlight.

And affiant further states that neither the plant of the defendant Tennessee Copper Company nor that of defendant Ducktown Sulphur, Copper & Iron Company (Limited) has been removed from its original location to any location nearer to the state line of the State of Georgia, but states on the contrary that said plants of both companies are now where they have always been since their original erection, and affiant further states that it is not true that injury as alleged has been doubled.

Affiant states further that recently the Tennessee Copper Company completed and now has in use a tall stack or chimney, the same being about three hundred and twenty-five feet in heighth, and that since the smoke from the smelter plant of the Tennessee Copper Company has been issuing through and from said stack that there have been no complaints to affiant's knowledge of any injury whatsoever, and there is no damage

being done by said smoke and gases at the present time so far as this affiant knows; and affiant states further that it is not true that within a radius of ten miles of Ducktown all vegetation has been destroyed either on the Georgia side of the state line, or on the Tennessee side of the state line. Affiant further states that he is acquainted with the facts and that of his knowledge but four citizens of the State of Georgia have ever instituted suits in the courts against either of these two defendant copper companies—that the only Georgia citizen, so far as this affiant knows, and he has made investigation for the purpose of ascertaining, who have ever sued either of these two companies are the following: T. M. Ross vs. Ducktown Sulphur, Copper & Iron Company; John A. Fortner vs. Ducktown Sulphur, Copper & Iron Co.; W. P. Ledford et al vs. Ducktown Sulphur, Copper & Iron Co., and Margaret A. Madison vs. Ducktown Sulphur, Copper & Iron Co. et al., and that these persons did sue one or the other, or both of the defendant companies, and that their suits have been disposed of or are now pending.

And affiant further states from his own knowledge and acquaintance with the situation that the location of the copper industry at Ducktown is at a point where it does less injury to vegetation than would be done by the location of such an industry at any other point throughout the southeastern part of the United States. The copper ores contain less than three per cent of copper so that they will not bear shipment to any other point for treatment but must be smelted and the copper contents extracted at the mines.

GORDAN G. HYATT.

Subscribed and sworn to before me on this 7th day of April, 1906.

[SEAL] J. H. MARCHANT,
Justice of Peace for Polk County, Tenn.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff.*
vs.
TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
No. 13.

STATE OF TENNESSEE.
Polk County.

Personally appeared before me, the undersigned authority, the witnesses whose names are hereunto subscribed, who being first duly sworn herein, on their oaths did say:

That they and each of them are residents and citizens of what is known as the Ducktown Mining District, in Polk County, Tennessee, and Fannin County, Georgia; that they are acquainted with the operations of the Tennessee Copper Company; that they have been residents of said district since the time when the open heap roast method was in use by the copper companies operating in the Ducktown district; that said open heap roasting process has been abandoned by the copper companies so operating and that the method of operation at the present time is by smelting the green ore, so that the smoke therefrom issues from a tall stack now in use; that said tall stack of the Tennessee Copper Company is about three hundred and twenty-five feet in heighth above its foundation which rests on the crest of a high hill; that since the smoke has been issuing through said tall stack they believe that there has not been and can not be any injury to vegetation or animal life.

These affiants are acquainted with the health of the communities in and adjacent to the Ducktown Mining District, and

to the personal knowledge of these affiants the health of said communities is in no wise affected by the copper fumes from the operations of said copper industries.

These affiants are acquainted with the public roads of the Ducktown District and of the territory adjacent thereto, and to the personal knowledge of these affiants said public roads are not and can not be injured or impaired by said gases and fumes.

It is not true that the pure air and sunlight is interfered with, nor is it true that the public roads are made uncomfortable or dangerous nor are they in any manner injuriously or harmfully affected.

These affiants are acquainted with the streams in and adjacent to the Ducktown Mining District, and these affiants state of their own knowledge that said streams are not impaired nor interfered with, with the exception of a limited territory on property belonging to one or the other of the mining companies, there has been little or no washing of the soil in the past. There is none at present unless it be in the immediate vicinity of the old roast yards, which property belongs to the Tennessee Copper Company, and which washing at present is due to operations which were had many years ago and which are now abandoned.

Prior to the installation of the present process of smelting these ores and when the process was to first roast the ores in open heaps there was considerable complaint that the fumes generated from such roasting would spread out over the adjacent territory and injure vegetation. At that time it was not thought that these fumes would be in the slightest injurious to health.

When the defendant companies some two years ago abandoned its old method of open heap roasting and adopted the

present method of smelting of green ores in the furnaces practically all complaints as to injury from gases and fumes ceased. In fact there was no such injury except at occasional intervals, which injury was caused by the fact that the fumes from the smelters passed out of the ordinary chimneys or smoke stacks, and in some kinds of weather they would reach the ground before being sufficiently diluted with the atmosphere to prevent their doing damage, and occasionally there were complaints of injury being done from such fumes; but quite recently the Tennessee Copper Company completed its tall chimney or stack, above referred to, and turned said smoke through said tall stack, since which time the same have been carried up to a great height in the air before being so thrown out, and at the present time in all conditions of the weather said fumes are so thoroughly diluted with the air before reaching the ground that we believe that absolutely no injury to animal or vegetable life can result even in the immediate vicinity of the smelters, the same being in our opinion rendered entirely harmless.

After the defendant companies abandoned the open heap roasting method and commenced the method of green ore smelting the atmosphere was so cleared up and the damage done by the smoke was so minimized that vegetation took on a new growth and the inhabitants of the towns in the immediate vicinity of these works were able to have beautiful lawns and gardens, as productive as possible for gardens to be in a locality where the land is naturally so poor and unfit even prior to the placing in operation of said high stack, the said damage was so small as to be almost unappreciable and to produce little or no complaint even in the immediate locality of the works.

Affiants further state that the property surrounding the Ducktown Mining District for many miles consists of poor, sterile land, almost valueless for agricultural purposes; that

the timber upon said land is very sparse and scrubby and is therefore unfit for any purpose other than cord wood; and that said land is not suitable for agricultural purposes and is fit for very little of anything except for the purposes for which it is being used, that is, for mining purposes.

D. S. WINCHESTER.	A. R. ROACH.
T. J. ADDINGTON.	W. D. DAVIS.
J. A. (X) JOHNSON.	HENRY GRIZZLE.
U. G. (X) WARREN.	W. N. MCCULLEY.
J. M. (X) MARR.	M. J. J. MCCULLEY.
JOHN LECHER.	C. C. (X) HALL.
W. J. (X) LEDFORD.	F. N. WHITE.
H. L. (X) LEDFORD.	E. N. HALL.
E. S. (X) SANIR.	G. W. CARTER.
C. J. HAEYSED.	R. O. MCALLISTER.
A. JOHNSON.	W. T. STALLCUP.
PALO ROBERSON.	BUD (X) HORLEY.

Sworn to and subscribed before me this April 6th, 1906.

[SEAL] J. T. MARCHANT,
Justice of the Peace for Polk County, Tenn.

WM. WARD.	S. J. ELLIOTT.
D. F. GRAHAM.	J. C. DAVIS.
J. M. WEHUNT.	W. H. PENLAND.
W. B. BATES.	J. G. COLE.
L. A. PITMAN.	E. T. WEAVER.
T. W. (X) MCJENKINS.	C. P. WALKER.
E. A. (X) THOMSON.	A. H. BURGER.
C. (X) UNDERWOOD.	W. M. (X) WOELL.
A. C. NICHOLSON.	V. R. BELL.
G .E. (X) FORESTER.	M. I. (X) CLARK.
W. M. (X) ONBY.	J. H. WALKER.

O. S. Wood.
W. O. (X) Roberson.
J. C. (X) Owen.
J. F. Hall.
Dan Peeples.
J. P. Parnell.
J. C. Wofford.
Arthur (X) Roberts.
E. M. Collis.
D. S. (X) Hall.
E. L. (X) McMillen.
Chas. Carnes.
Henry Thomas.
B. L. (X) Cheatham.
W. F. (X) Huse.
J. M. Stuart.
J. D. Sperlin.
W. A. Fulton.
B. N. Dyer.
W. A. Taylor.
S. L. Rymer.
A. B. Davis.
W. I. Frenena.
W. W. Anderson.
J. H. Mashburn.
J. C. Coffey.
D. C. Burger.
J. O. Cole.
M. C. Moss.
R. C. Davenport.
G. W. Carpenter.
W. M. Hensley.
C. L. (X) Hayseb.
T. B. Dockery.
M. L. Anderson.
A. T. Sanders.
A. J. Guinn.
W. F. Johnson.
J. F. Ellis.
R. E. Cookstan.
S. P. Peeples.
G. C. Abernathy.
J. H. Allen.
J. M. Carnes.
F. H. Helton.
L. J. Roach.
H. I. Pitmore.
M. R. Stallcup.
V. T. Mortan.
O. S. Allen.
C. S. Cheatham.
J. M. McGill.
H. Worley.
J. M. Johnson.
C. V. Cain.
E. C. Chaney.
J. J. Watson.
A. L. Jones.
J. R. Bingham.
J. F. Ambrum.
J. E. Taylor.
Chas. Skullman.
G. C. Presswood.
E. A. Beaver.

W. J. FREEMAN. NORMAN NEWICK.

Sworn to and subscribed before me this the 7th day of April, 1906.

[SEAL] J. H. MARCHANT,
Justice of Peace for Polk County, Tenn.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General.*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before the undersigned, a Notary Public in and for said County and State, J. L. Center, who being first duly sworn herein, on his oath did say: That he is 67 years old and has lived and resided in what is known as the Ducktown Mining District since the year of 1850; that he is acquainted with the copper operations of both the defendant companies and has been ever since said defendant companies began operating in the Ducktown Mining District; that he owns a farm on Ocoee River, in Polk County, Tennessee, and within half a mile from the furnace plants of the copper companies and within one-half mile of Fannin County, Georgia; that he has cultivated said farm and produced as good crops thereon as the land was capable of making.

Affiant further states that the McCay heirs own a farm

on said river, partially in Fannin County, Georgia, and partially in Polk County, Tennessee, and within a quarter of a mile of the smelting plant of the Tennessee Copper Company; and that they raised good crops on said farm up until the beginning of 1905 when said farm was laid off into town lots.

Affiant further states that he has frequently traveled the roads in the Northern part of Georgia, and to his knowledge said roads have not in any way been injured, interfered with or damaged by the copper fumes and gases from said copper companies' plants, and that said roads are not impeded or rendered uncomfortable by said gases and fumes.

As stated above, affiant has lived in this immediate section for over fifty years and has had full opportunity to observe the condition of the water courses in Fannin County, Georgia, and Polk County, Tennessee, during said time, and to his own personal knowledge the streams within said counties and states have not been injured or interfered with in any manner as a result of said copper operations.

J. L. CENTER.

Subscribed and sworn to before me on this 7th day of April, 1906.

[SEAL] G. G. HYATT,
Notary Public Polk County, Tenn.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before the undersigned, a Notary Public in and for Polk County, Tennessee, S. J. Spargo, Postmaster at Ducktown, Tennessee, J. F. Marchant and W. S. Maughan, Justices of the Peace of Polk County, Tennessee, who being first duly sworn on their oaths did say: That their official positions are as hereinabove stated and that they and each of them are residents and citizens of Ducktown, Polk County, Tennessee; that they are acquainted with the operations of the Tennessee Copper Company and the Ducktown Sulphur, Copper & Iron Company (Limited), of Polk County, Tennessee, and with the conditions of the timber, crops and vegetation in the northern part of the State of Georgia, frequently passing through that territory in Fannin County, Georgia. Further they say that the injury as reported to the northern part of the State of Georgia is greatly exaggerated; that aside from slight injury to a small amount of scrub timber and undergrowth immediately adjacent to the state line between Georgia and Tennessee, and just across the state line from the copper companies's operations, there is practically no damage, and that beyond that distance there is no perceptible injury either to crops or timber.

Affiants further state that the public roads in the State of Georgia are not in any manner injured nor interfered with by the operations from said copper industries, and that said roads are now as good as, if not better than they have ever been. And further these affiants say that the smoke and gases from said works are not injurious to the health of the people of Georgia, nor to the people of Tennessee, living in the territory alleged to be affected by said smoke, but state, on the contrary, that the health of the communities alleged to be affected is as good now if not better than it has ever been before.

Affiants further state that the country adjacent to said copper operations, both in Georgia and Tennessee, is a wild and mountainous country, very sparsely settled, that the timber is almost entirely second growth, the original growth having been cut off, burned into charcoal and sold to the Copper Companies then operating during the period from 1860 to 1879; that the soil is poor and sterile, that it was never adapted to agricultural purposes, that mining is the predominating interest and paramount to all others combined within a radius of fifty miles; that the mines offer a market for the produce of the farmers, for the sale of the timber as fire wood, and for building and mining purposes, and affords the only market for the labor of the inhabitants of the territory adjacent to said operations, and that without the operations of the copper industries in Polk County, Tennessee, the inhabitants of that part of Tennessee adjacent to said copper operations as well as the inhabitants of Northern Georgia would suffer a lack of employment in any line whatever; and that the closing down of said works would cause great hardship to thousands of said citizens and residents of the territory adjacent to said operations in North Carolina, in Georgia, and in Tennessee, who would be left destitute, without homes and without work, and

would be compelled to remove themselves and their families to other parts of the country, seeking employment wherever they could find it, or to trust themselves to the charity of a stricken community.

Affiants state further that recently the Tennessee Copper Company completed and now has in use a tall stack or chimney, the same being 325 feet in height, and that since the construction of said stack and since the smoke from the smelter plant of the Tennessee Copper Company has been issuing through said stack that there have been no complaints to affiants' knowledge of any injury to vegetation or animal life; and there is no damage being done by said smoke and gases at the present time to these affiants' knowledge.

SAMUEL J. SPARGO.
J. H. MARCHANT.
W. S. MAUGHAN.

Subscribed and sworn to before me on this April 6th, 1906.

[SEAL] G. G. HYATT,
Notary Public Polk County, Tenn.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me, the undersigned, a Notary Public in and for said County and State, F. M. Kimsey, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Polk County, State of Tennessee; that he is a practicing physician and surgeon, being a graduate of Vanderbilt Medical College of Vanderbilt University, at Nashville, Tennessee; that he has been practicing medicine for about ten years; and further that affiant in the practice of medicine and surgery has had an opportunity to observe the state of health of the people of Fannin County, Georgia, and of Polk County, Tennessee; that from affiant's observation and knowledge he states that the fumes and gases from the copper operations at Ducktown, Tennessee, near the state line between Tennessee and Georgia are not deleterious to the health of the people of said counties; but on the contrary states that the health of the people of Fannin County, Georgia, is now as good as it has ever been to affiant's knowledge.

Affiant further states, based on his own knowledge and experience and observation, that the health of the citizens of the zone alleged to be subjected to fumes from the copper opera-

tions at or near Ducktown, Tennesee, is as good as the health of the inhabitants of other localities not so affected.

F. M. KIMSEY.

Subscribed and sworn to before me this 6th day of April, 1906.

[SEAL] G. G. HYATT,
Notary Public Polk County, Tenn.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before the undersigned, a Notary Public in and for Polk County, Tennessee, W. I. Morris and S. O. Welch, who being first duly sworn, on their oaths did say: That they are citizens and residents of Ducktown, Polk County, Tennessee, and that they are respectively United States Commissioner and Deputy United States Marshal for the Eastern District of Tennessee, at Ducktown; that they are acquainted with the operations of the Tennessee Copper Company and the Ducktown Sulphur, Copper & Iron Company (Limited) of Polk County, Tennessee, and with the conditions of the timber, crops and vegetation in the northern part of the State of Georgia, frequently passing through the territory in Fannin County,

Georgia, as well as being acquainted with that part of the Ducktown Mining District in Polk County, Tennessee. Further they say that the injury as reported to the northern part of the State of Georgia is greatly exaggerated; that aside from slight injury to a small amount of scrub timber and undergrowth immediately adjacent to the state line between Georgia and Tennessee, and just across the state line from the copper companies' operations, there is practically no damage, and that beyond that distance there is no perceptible injury either to crops or timber.

Affiants further state that the public roads in the State of Georgia are not in any manner injured nor interfered with by the operations from said copper industries, and that said roads are now as good as, if not better than they have ever been. And further these affiants say that the smoke and gases from said works are not injurious to the health of the people of Georgia, nor to the people of Tennessee, living in the territory alleged to be affected by said smoke, but state on the contrary that the health of the communities alleged to be affected is as good now, if not better, than it has ever been before.

Affiants further state that the country adjacent to said copper operations, both in Georgia and Tennessee, is a wild and mountainous country, very sparsely settled, that the timber is almost entirely second growth, the original growth having been cut off, burned into charcoal and sold to the copper companies then operating during the period from 1860 to 1879; that the soil is poor and sterile, that it was never adapted to agricultural purposes, that mining is the predominating interest and paramount to all other interests combined within a radius of fifty miles; that the mines offer a market for the produce of the farmers, for the sale of the timber as fire wood, and for building and mining purposes, and affords the only market

for the labor of the inhabitants of the territory adjacent to said operations, and that without the operations of the copper industries in Polk County, Tennessee, the inhabitants of that part of Tennessee adjacent to said copper operations, as well as the inhabitants of Northern Georgia would suffer a lack of employment in any line whatever; and that the closing down of said works would cause great hardship to thousands of said citizens and residents of the territory adjacent to said operations in North Carolina, Georgia and in Tennessee, who would be left destitute, without homes and without work, and would be compelled to remove themselves and their families to other parts of the country, seeking employment wherever they could find it, or to trust themselves to the charity of a stricken community.

Affiants state further that recently the Tennessee Copper Company completed and now has in use a tall stack or chimney, the same being 325 feet in heighth, and that since the construction of said stack and since the smoke from the smelter plant of the Tennessee Copper Company has been issuing through said stack that there have been no complaints to affiants' knowledge of any injury to vegetation or animal life; and there is no damage being done by said smoke and gases at the present time to these affiants' knowledge.

W. I. MORRIS,
S. O. WELCH.

Subscribed and sworn to before me on this April 6th, 1906.

[SEAL] G. G. HYATT,
Notary Public Polk County, Tenn.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before the undersigned, a Notary Public in and for said County and State, H. E. Center, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Polk County, State of Tennessee; that he is a practicing physician and surgeon, being a graduate of the College of Physicians and Surgeons, of Atlanta, Georgia; that he has been practicing medicine for seven years; that he was a citizen and resident of Fannin County, Georgia, up to about six months ago, where he practiced his profession for a period of about six years; that from affiant's observation and knowledge he states that the fumes and gases from the copper operations at Ducktown, Tennessee, near the state line between Tennessee and Gorgia are not deleterious to the health of the people of Fannin County, Georgia, or of Polk County, Tennessee; but on the contrary that the health of the people of Fannin County, Georgia, as well as of Polk County, Tennessee, is now as good as it has ever been to affiant's knowledge.

Affiant further states, based on his own knowledge, experience and observation, that the health of the zone alleged to be subjected to fumes from the copper operations at or near Duck-

town, Tennessee, is as good as the health of the inhabitants of other localities not so affected.

This affiant is well acquainted with the public roads of the Ducktown District, and of especially the condition of the roads in Fannin County, Georgia, and to the personal knowledge of this affiant said public roads are not and can not be injured or impaired by said gases and fumes.

It is not true by any means that the pure air and sunlight is interfered with, nor is it true that the public roads are made uncomfortable or dangerous, nor are they in any manner injuriously or harmfully affected.

This affiant is acquainted with the streams in and adjacent to the Ducktown Mining District, and he states that said streams are not impaired nor interfered with, in the least.

H. E. CENTER.

Subscribed and sworn to before me on this 7th day of April, 1906.

[SEAL]

G. G. HYATT,
Notary Public Polk County, Tenn.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff.*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me, the undersigned, a Notary Public in and for Polk County, Tennessee, M. T. Dooley, who being first duly sworn upon his oath did say:

That he is a citizen and resident and tax payer of the State of Georgia, Fannin County, and is a merchant residing at McCays, Georgia, near the line between the States of Tennessee and Georgia, and in what is commonly known as the Ducktown Mining District. Affiant has been a resident of the State of of Georgia for many years, and has been acquainted with the operations of the copper companies in said Ducktown Mining District since before the open heap roast method was abandoned by said companies. Affiant states that under the open heap roast method there were complaints made of injury being done by the copper fumes and gases emanating from the roast heaps. Affiant states further that since the abandonment of the open heap roast method by said copper companies there have practically been no such complaints. Affiant states further that recently the Tennessee Copper Company completed and now has in use a tall stack or chimney, the same being about 325 feet in heighth, and that since the smoke from the smelter plant of the Tennessee Copper Company has been issuing through and from

said stack that there have been no further complaints to affiant's knowledge, and there is no damage being done by said smoke and gases at the present time so far as this affiant knows.

Affiant further states that the public roads of the State of Georgia are not impaired nor interfered with; that the health of the citizens of Georgia is not interfered with, but that it is as good, if not better, than the health of residents of similar mountainous communities.

Affiant further states that the streams are not impaired and are not interfered with and have never been injured or impaired by the gases and fumes from said copper operations.

Affiant further states that aside from a very small area immediately adjacent to the old roast yards there has been no washing of the soil, and that any washing which has been done at the point stated, to this affiant's knowledge and belief, was the result of the old open heap roast method, now long since abandoned.

Affiant further states that the soil adjacent to the Ducktown Mining District is thin, poor and sterile and that it is not an agricultural country; that the timber is, generally speaking, second growth and of little value except for cord wood purposes; and further that the copper mining industry is paramount to all other industries within many miles of Ducktown.

Affiant further states that any interference with or closing down of the plants of the copper companies even for a short while would work untold hardship upon the thousands of laboring people dependent for their daily bread upon the continuous operations of this company's plant, and which would also be certain to result in great loss to the companies themselves.

Affiant further states that the people of North Georgia, so far as he is able to ascertain, do not desire the plants interfered with or any steps taken leading to the embarrassment incident to even a temporary closing down of the plants.

When it became understood by the people of North Georgia that the State of Georgia was intending to prosecute this suit a mass meeting of citizens of the State of Georgia was called on February 3rd, 1906 to consider the pending litigation between the State of Georgia and said copper companies. At said mass meeting, which was called to order by W. P. Matthews, a Justice of the Peace, this affiant was nominated and elected chairman, and J. N. Cason was elected secretary, when minutes were duly prepared and resolutions were duly adopted without dissent by the mass meeting then assembled as above mentioned at Harper Town store house in Fannin County, Georgia.

Affiant files as exhibit "A" to this affidavit a copy of the minutes of and resolutions adopted by said meeting, together with a copy of the names to said minutes and resolutions.

M. T. DOOLEY.

Subscribed and sworn to before me on this April 6th, 1906.

[SEAL] G. G. HYATT,
Notary Public Polk County, Tenn.

"Exhibit A."

Minutes of mass meeting of Georgia citizens held at Harper Town Store House, in Fannin County, Georgia, February 3rd, 1906. Called to consider the pending litigation between the State of Georgia and the Tennessee Copper Companies.

W. P. Matthews, J. P., called the meeting to order, and M. T. Dooley was nominated and elected chairman of the meeting. J. N. Cason was elected secretary of the meeting, and each of the above names accepted the office and served as such.

There were present at the meeting 300 citizens of Georgia,

whose names are attached to these minutes on a separate sheet.

It was moved and seconded that a committee of three on resolutions be appointed by the chairman, which motion being put, was duly carried, and the following were appointed by the chairman as Committee on Resolutions: W. P. Key, W. P. Matthews and C. L. Parris. The said committee then withdrew from the meeting. Speeches were made by Col. Jeff A. Henned and others, all of whom addressed the assembled citizens on the subject of the litigation pending, wherein the State of Georgia by its Attorney General is seeking to interfere with and impede the operations of the copper industries at Ducktown, Tennessee. After the speaking, come the Committee on Resolutions, returned into the open meeting and presented the following resolutions:

RESOLUTIONS.

Whereas, the State of Georgia, by its Attorney General, has recently filed in the Supreme Court of the United States an original bill against the Tennessee Copper Company, and the Ducktown Sulphur, Copper & Iron Company, two certain companies operating for copper in Polk County, Tennessee, adjacent to the Georgia state line, and

Whereas, it is proceeding in said bill to interfere with and impede the working and further operations of said copper companies; and

Whereas, there are large number of Georgia citizens directly interested as employes in said two companies, and large numbers of Georgia merchants adjacent to the place of operation carrying on their business dependent upon said companies, and large numbers of farmers and other persons throughout the northern part of Georgia, all of whom receive either directly or indirectly benefit from the operation of the said copper industries, and

Whereas, said bill above mentioned, if it shall become effective, may cause the issuance of an injunction or other orders or decrees from the Supreme Court of the United States, which will greatly and in all probability disastrously effect the citizenship of North Georgia, and particularly the merchants, farmers and laborers; now, therefore be it

Resolved, by this mass meeting in convention assembled,

1st. That it is not the sense of the citizenship of North Georgia that said copper industries be in any manner impeded or interfered with.

2nd. That said interference will work a calamity to the people of North Georgia, to their property interests, to their wives and to their children, that whole communities consisting of thousands of people, not alone of North Georgia, but across the state line in Tennessee, will be affected by any interference with the copper operations above mentioned, and if injunction shall issue from the said Supreme Court, closing down or interfering with said operations, there will be thousands of people thrown on starvation, without food and without shelter.

3rd. Be it further Resolved, That it is the sense and desire of the citizens of North Georgia that the copper companies above mentioned shall be compelled to pay in damages for any injury which they may have inflicted upon the property of any of the people adjacent to their operations, but it is resolved and insisted that the people of North Georgia are opposed to any injunctive measure whatever.

4th. Be it further Resolved, That every person present, realizing the danger of this situation and the hazard to the working people, merchants, and farmers in this and adjacent communities, shall use every effort to obtain evidence or take such steps and use such influence as each member of this mass meeting may be able to use, against the injunctive relief above mentioned.

5th. Be it further Resolved, That a copy of these resolutions, duly signed by the chairman and secretary of this meeting, be transmitted by mail to His Excellency Joseph M. Terrell, Governor of the State of Georgia, and that a copy of said resolution duly signed as aforesaid be transmitted by mail to the Honorable John C. Hart, Attorney General of the State of Georgia.

Upon motion, the foregoing resolutions were unanimously adopted. The meeting was then, upon motion, declared adjourned.

M. T. DOOLEY,
Chairman.

J. M. CASON,
Secretary.

H. N. CORLISS.
A. J. STONE.
J. A. CAYLOR.
W. G. SMITH.
O. S. POE.
O. F. MITCHELL.
S. B. THOMAS.
W. L. COOPER.
GUS SMITH.
JAMES HAWKINS.
JOHN FULLER.
S. JONES.
S. BENNETT.
ARCH BALLEW.
G. D. TANKERSLY.
JOS. OWENS.
J. C. TURNER.
W. M. WEBB.
W. P. WALKER.
J. M. FALLS.
J. H. BURNS.
WM. GARRON.
J. D. THOMASON.
F. M. WILLIAMS.
B. B. BEARDEN.
J. W. FORTNER.
A. F. BURNS.
M. L. BURNS.
J. E. FULBRIGHT.
J. H. MULL.
J. O. RIDER.
T. B. TURNER.
W. L. SCROGGS.
J. M. CARR.
J. E. WILSON.
G. G. SMITH.

S. E. Jones.
W. L. Scroggs.
W. H. Robinson.
J. B. Rickets.
J. W. Miller.
N. T. Philips.
M. E. Caldwell.
W. J. Matthews, J. P.
W. D. Hawkins.
F. L. Harper.
J. T. McCay.
G. W. Guy.
J. D. Beavers.
W. McFarland.
N. D. Parris.
E. W. Howell.
A. B. Tabor.
G. M. Foster.
A. B. Smith.
E. L. Gurley.
S. M. Falls.
W. G. White.
H. A. Shelton.
G. C. Bailey.
Andrew Hill.
A. M. Johnson.
E. F. Hughes.
B. B. Anderson.
L. I. Tilley.
L. B. Parris.
A. J. Kell.
J. F. Curtis.
W. M. Self.
Jeff A. Hedden.
E. Block.
C. C. Andrews.
J. A. White.
H. B. Ross.
W. C. Garron.
B. H. Waldon.
J. W. Turner.
S. H. Dean.
H. C. Baker.
John Smith.
J. T. Frye.
J. F. Justice.
A. D. Angel.
J. F. Brown.
Jas. Pitman.
H. F. Williams.
M. Gates.
Geo. Elrod.
L. C. Henson.
T. J. Tally.
J. H. Campbell.
H. J. Dupree.
Walter Lilly.
John Concad.
R. H. Garrett.
W. W. Painter.
J. H. Kisselburg.
J. E. Caylor.
J. M. Bell.
J. W. Fortner.

A. J. Baker.
J. N. Parker.
J. N. Carson.
R. J. Cook.
J. G. Woody.
Geo. E. Keith.
J. H. Pulliam.
J. B. Pope.
Jas. Gates.
W. T. Elrod.
E. M. Flowers.
W. S. Sisson.
H. Roberts.
H. G. Payne.
Joe Harbin.
R. A. Nalor.
Burt Bailey.
J. A. Corliss.
B. A. Corliss.
W. H. Foster.
R. M. Caylor.
J. M. Withrow.
W. H. Smith.
W. H. Evans.
J. R. Tankersly.
W. P. Thomas.
E. E. Evans.
J. E. Green.
Wm. Dillards.
J. J. Jones.
Herbert Weese.
C. C. Vellenoweth.
H. G. Ledford.
J. L. Ledford.
G. W. Stevens.
W. B. Coppege.
A. Arp.
J. W. Stanley.
Charles Jones.
H. M. Bennett.
John McFarland.
W. G. Woody.
J. E. Garrom.
J. N. Ellis.
W. J. Wood.
F. W. Jarrard.
W. M. Stewman.
J. H. Farmer.
D. R. Payne.
L. A. Woody.
J. C. Standridge.
W. G. Davis.
W. H. Anderson.
J. H. Cook.
C. W. Jones.
L. B. Patterson.
J. L. Williams.
G. D. Angel.
J. C. Bonner.
G. E. Crawford.
H. N. Ashe.
R. A. Burns.
G. C. Davenport.
J. W. Walker.

W. W. Fulbright.
J. W. Wright.
M. D. Richards.
F. Ellis.
John Jones.
W. T. Mahaferty.
D. M. Weeks.
O. D. Elrod.
D. B. Bolling.
J. H. Baldridge.
J. W. Robinson.
J. H. Brock.
W. B. Phillips.
A. C. Cook.
G. C. Baker.
J. P. Ellis.
O. M. Baldridge.
L. C. Bonner.
J. J. Witherow.
J. N. Standridge.
A. A. McKinney.
J. B. Green.
H. R. Woody.
F. M. Parris.
L. C. Turner.
G. W. Richards.
W. H. White.
A. N. Long.
E. W. Chapman.
J. M. Garren.
J. P. Baker.
T. B. Cole.
W. A. Williams.
J. A. Hampton.
W. M. Parris.
J. M. Chauncey.
A. M. White.
J. B. Wittenberger.
G. W. Self.
J. R. Harper.
W. C. Tanner.
G. Standridge.
O. P. Tilley.
H. F. Scoggs.
L. Walker.
M. T. Dooley.
J. J. Matthews.
W. F. Hampton.
Sam Painter, Jr.
T. L. Campbell.
M. McFarland.
T. H. Lively.
I. D. Jenson.
J. H. Shelton.
W. W. Mitchell.
J. M. Stone.
D. L. Parris.
W. A. Curtis.
E. M. Cagle.
D. C. Allison.
D. W. Painter.
A. J. Brown.
J. E. Adams.
H. C. Parris.

W. P. Key.
R. A Culberson.
W. A. Welch.
L. L. Tilley.
C. L. Parris.
L. L. Woody.
J. L. Collector.
W. W. Thrasher.
G. W. Falls.
W. A. Smith.
R. L. Kell.
S. S. Frady.
J. H. Drennen.
B. H. Dooley.
G. W. Jones.
E. P. Galloway.
W. A. Frazier.
Jas. Harper.
J. J. Nix.
J. N. Peebles.
J. A. Keenon.
Wm. Mitchell.
Sherman Martin.
M. V. Kell.
G. C. Dooley.
J. N. Hughes.
S. J. Jones.
T. J. Dickey.
C. J. Watson.
L. H. Tilley.
W. M. Dooley.
H. M. Craig.
Matthews.
F. T. Sargent.
W. G. Frye.
L. Belisle.
C. W. Ballew.
R. L. Standridge.
W. S. Thomas.
Roland Pope.
L. J. Elrod.
J. R. Poe.
O. U. Langston.
J. C. Bowers.
D. D. Weaver.
John Davis.
W. H. Sisson.
G. C. Hughes.
J. J. Groves.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, Randolph Adams who, being first duly sworn herein, upon his oath did say: That he is a resident of Polk County, Tennessee; that he is a mining engineer by profession, being a graduate of the Columbia School of Mines of the Class of 1883; that he has been engaged in the profession of mining engineering and metallurgy for about 23 years prior to the date of this affidavit, and that during almost the entire time since his graduation he has been engaged in mining and treating copper ores and the observation of methods of mining and treating such ores; that his mining, treating and observation of such ores has been conducted in the States of Arizona, Utah, Montana, Michigan and Tennessee, in the United States, and New South Wales, South Australia, and Queensland in Australia.

Affiant is the General Manager of the Tennessee Copper Company, and has been General Manager of said company since said Tennessee Copper Company began its first operations in Polk County, Tennessee, and that as such General Manager he is acquainted with the ores treated by that company and with the details of the general conditions prevailing at the works

of that company in Polk County, Tennessee. The ore mined by the Tennessee Copper Company contains on a general average from 2½ to 3 per cent of copper, and on account of the low copper contents of the ore it is impossible to transport the ores to any other point for treatment, so that the copper ores mined from the property of the Tennessee Copper Company, as well as all of the copper ores of the Ducktown district, must necessarily be treated in the immediate vicinity of the mines. These Ducktown copper ores contain no by-products. They have not the advantage of many of the ores mined in the western parts of the United States, which ores in many instances contain by-products of silver and gold, which, being saved in the treatment of the ores, greatly increase the values extracted therefrom. The ores of the Ducktown basin are not self-fluxing, that is to say, they do not contain sufficient silica to permit of their treatment in the furnaces without the introduction of an added tonnage of silica. The result is that the cost of production is greater than is experienced by many of the western mines whose ores contain sufficient silica to act as flux without adding extra material. The fluxing material used by the Tennessee Copper Company contains no metal values, so that the necessary use of flux is an added cost with no profit. It is simply by virtue of the combination of the cheap cost of material, fuel, etc., coupled with the situation of the fluxing material used, that the companies in the Ducktown district are able to treat the ores of that district under any circumstances whatsoever.

Affiant further states that he is acquainted with the general geological and agricultural conditions prevailing in the district adjacent to the mining operations, and particularly in that part of the district in Northern Georgia, Eastern Tennessee and Western North Carolina, and affiant states of his own knowledge that there is no place in the Southeastern part of the United States where the injury resulting, if any, from the min-

ing and treatment of ores of the Ducktown district would or could result in as little damage to proporty as occurs to the property adjacent to the Ducktown district for the reason that the character of the property alleged to be injured is such that its value by comparison with other property throughout the South is extremely small.

There is no point in the Southeastern part of the United States known to this affiant where the values of farming and timber property are so small as in the region adjacent to Ducktown. The timber of that region can not be classed as merchantable timber, and the district can not be considered an agricultural district because of the fact that the soil of that region is of such inferior quality and is so thin and poor that it is not adapted to agricultural purposes. The farms are very small and the most of the agricultural interests are limited strictly to stock grazing.

When this affiant first came to Polk County, Tennessee, as General Manager of the Tennessee Copper Company, the process then in use in Polk County was the open heap roasting method, which was at that time the only known method for treatment of ores of the character of the Ducktown ores. The treatment by that method necessitated the placing of the ores in large heaps or piles in the open air where the ore was ignited by means of fuel supplied for that purpose and there smouldering in the open air cast off clouds of smoke at the elevation of the ground at the location of the roast yards. The smoke and gases arising from this roasting method were blown by the winds over and along the ground at a very low elevation, coming in direct contact with the soil and vegetation from the moment of the creation of the smoke and gases until their dissipation. This method had been in use, so this affiant has been informed, by the companies which had been operating in the Ducktown district from the earliest period in the history of

the operations of the Ducktown mines. Later a method was discovered and put into use by which the ores were treated by being smelted green, that is to say, without having been first roasted in the open air. Under this new method the green ores were introduced directly into the furnaces and the fumes and gases created in the smelting process were carried through a flue connected with the small stack or chimney. It was found, however, that the flue and stack which had been erected with reference to the smelting of roasted ores was not sufficient to carry off the fumes and gases created by the direct smelting process. The result was that much of the fumes were discharged directly at the top of the smelter plant or building through the small stacks which protrude through the roof of the smelter building from each furnace, and the result was that these fumes which were discharged through these furnace tops were carried along and over the surface of the ground in much the same manner as had been done by the open heap roasting process.

Later it was determined to construct a larger and taller stack with a greater flue than had been previously used, and in the construction of this new stack calculations were made with respect to the dilution of the gases and the height of the stack was so estimated as that the fumes might be carried to such height as that they would be dissipated and diluted with atmosphere to such extent that any injury to vegetation would be prevented.

This new stack recently constructed is now in use. The old flue with its stack of a height of only about 120 feet has been abandoned, is not now being used, and it is not the intention of the Tennessee Copper Company to again use said old stack.

The methods used by the Tennessee Copper Company in the treatment of its ores have always been and now are in accord-

ance with the highest known state of the art. All improvements, modifications and new appliances have been put into use by this company as rapidly as the efficiency and utility of the same could be demonstrated, and it has been the object of the officials of the Tennessee Copper Company to take advantage of and to investigate and adopt new ideas with respect to the treatment of these ores so as to keep the treatment up to the highest known state of the art, and in this respect neither expense, time nor labor has been spared.

Affiant has had compiled a statement showing the pay roll of the Tennessee Copper Company, together with the number of men employed covering the months from June, 1905, to March, 1906, and has also had a statement compiled showing the amount of supplies purchased, which includes freight paid covering the same period of time, and also a statement showing the amount of freight handled in car load lots by the railroad of the Tennessee Copper Company. This railroad operates from a connection with the Louisville & Nashville Railroad at a point between the stations of Isabella, Tennessee, and McCays, Tennessee, to the various mines of the Tennessee Copper Company in the Ducktown district, covering a mileage of about twelve miles, and the amount of car loads and tonnage shown includes all material of every kind handled by the Tennessee Copper Company's railroad whether said freight be received from outside shipments or from the mines. Said statement of pay roll, supplies purchased, and of material handled is hereto attached as exhibit "A" to this affidavit.

As previously stated the new stack recently constructed by the Tennessee Copper Company is now in use, as are all of the new furnaces. This stack is connected with all of the furnaces of the Tennessee Copper Company by means of a large flue which is 700 feet in length from the nearest furnace to the center of the new stack. The base of the stack by actual meas-

urement recently made is 112.5 feet above water level of the Ocoee river. The stack is 325 feet above its foundation, making the total height above water level of 437.5 feet. The flue connecting the furnaces with the stack extends from the furnaces up the side and to the crest of the hill upon which the base of the stack rests. The magnitude of the construction of this flue, together with the unexpected and unavoidable delays and necessary mechanical changes delayed the completion of the stack beyond the time when it was at first anticipated that the stack would be completed and in use. At the present time, however, said stack is in use and is carrying off all the fumes and gases from all of the furnaces of the Tennessee Copper Company. From observations made since said new stack has been in use said stack is fully meeting all the expectations which were had in planning its original construction. The smoke and gases issuing from said stack have been observed to go directly up into the air above the stack at times to a height of a thousand feet before showing any tendency to drift away with the winds and before beginning to be diluted with the atmosphere. Since the new stack has been in commission no complaints have been heard of any injury whatever being inflicted by the fumes and gases issuing from the new stack, and it is the belief of this affiant that said stack will entirely remove all grounds for complaint.

Under the use of the old stack with its insufficient draft and with its capacity unequal to the quantity of gases emanating from the smelter plant the flue dust was carried from the furnaces out through the short furnace tops and from out the old brick stack. Since the new stack has been in commission this condition has been entirely eradicated. The chief reason for this change with respect to flue dust has been the provision of a large dust settling chamber 208.11 feet in length, 30 feet in width, and 24 feet in height, placed in the construction of

the flue between the furnaces and the stack. All of the gases from the furnaces pass through this chamber and owing to the large cross section of the chamber the velocity of the gases is so reduced as that the flue dust settles and only the gases free from dust enter the stack.

Affiant further states that the allegations contained in the bill in this cause with respect to the removal of the operations of the Tennessee Copper Company from a point several miles distant within the State of Tennessee, to a point nearer to the Georgia line than the former location, is erroneous. Affiant has been General Manager of the Tennessee Copper Company since it first began the construction of its plant, and affiant states that the smelter location was originally made where it now stands and the smelter was there constructed and has there remained until this date and has never been removed.

RANDOLPH ADAMS.

Subscribed and sworn to before me on this April 12th, 1906.

(SEAL) G. G. HYATT,

Notary Public, Polk County, Tenn.

Exhibit "A" to Affidavit of Randolph Adams.

Statement Tennessee Copper Company—General Pay Roll.

	Amount	Shift Worked	Men on Pay Roll
June, 1905	$47,086.38	25,715.8	1513
July, 1905	50,481.11	28,000.5	1647
August, 1905	51,595.75	28,821.4	1693
September, 1905	50,126.04	27,991.4	1630
October, 1905	54,573.62	30,488.0	1655
November, 1905	55,572.30	31,193.2 (Est.)	1700
December, 1905	53,373.92	34,081.8	1692
January, 1906	60,523.99	33,839.9	
February, 1906	61,259.48		
March, 1906	63,985.59		

Supplies Purchased, Etc., Including Freight Paid.

June, 1905	$ 63,499.74
July, 1905	66,142.35
August, 1905	80,387.00
September, 1905	61,126.21
October, 1905	36,897.13
November, 1905	108,810.21
December, 1905	90,486.45
January, 1906	108,113.27
February, 1906	139,594.48

Car Loads all Material Handled.

	Car Loads	Tonnage
1902	26,739	714,473
1903	27,874	809,795
1904	17,903	530,041
1905	17,648	538,917

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General* JOHN C. HART, *Plaintiff*,

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, C. H. Glasser, who, being first duly sworn herein, upon his oath did say: That he is a mechanical engineer, and has been engaged in that profession since the year 1887, having taken a course in mechanical engineering at Cornell University; that since the year 1895 he has been engaged as a furnace builder and has had experience in furnace construction during that period in the States of Montana, New Jersey, Utah and Tennessee; that he is in active charge of all smelter construction work for the Tennessee Copper Company in Polk County, Tennessee, and that all of the smelter construction and improvements have been made by said company under his direction and supervision since said company first begun the construction of its smelter plant during the year 1900; and affiant further states that the Tennessee Copper Company has always and is now conducting its operations according to the very highest known state of the art. This affiant states of his own knowledge that neither expense, time nor labor has been spared by said company and its officials in obtaining and using all of the latest and most scientific appliances in the conduct of its operations.

Affiant further states that the new furnaces and the new stack were built under his direction and supervision, and that said stack is in complete use.

Affiant further states that in the original planning of said stack calculations were made for the purpose of determining the height to which said stack should be constructed in order that any ground for complaint of injury by gases and fumes might be alleviated and that said stack was constructed with the view of discharging the gases at such a high elevation as that the gases discharged would be so diluted with atmosphere as that any injurious affect upon adjacent vegetation would be imperceptible.

Affiant states that since said stack has been in use and the smoke emanating from its top it seems to have fully met with the calculations made and expectations had with respect to its construction. This affiant has noticed said smoke issuing from said stack, and has seen the same upon leaving said stack mount into the atmosphere the distance of fully a thousand feet before beginning to be driven away and dissipated by the atmosphere. It seems to be the general opinion that the tall stack will entirely remove any ground for complaint, and so far as this affiant has been able to ascertain there have been no complaints whatever since said stack was placed in use.

Affiant further states that the smelter plant of the Tennessee Copper Company was originally constructed at the same point where it is now located, that it has never been removed from its present location, and that it has never been removed from any former location several miles within the State of Tennessee to any point nearer to the State line of the State of Georgia, but affiant shows on the contrary that the original construction of said smelter plant was begun at the same point as is now occupied by said smelter plant and that said smelter

plant has remained at that point ever since the beginning of its original construction.

C. H. GLASSER.

Subscribed and sworn to before me on this March 12th, 1906.

(seal) G. G. HYATT,
Notary Public, Polk County, Tenn.

Supplemental Affidavit of Charles A. Weller.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, }
County of Knox. }

Personally appeared before me, the undersigned authority, a Notary Public in and for Knox County, Tennessee, Charles A. Weller, who being duly sworn herein, upon his oath did say:

That he is the same Charles A. Weller, who made an affidavit in this cause on November 17th, 1905; that since the making of the affidavit aforesaid, affiant has, in company with Frank L. Nason, a geologist and mining engineer, made a trip through parts of North Georgia adjacent to the Ducktown copper mining district. This trip made in said region was made since the smoke of the Tennessee Copper Company has been

issuing from its smelter plant through the new stack now in use at said plant. Affiant and the said Frank L. Nason on said trip, conversed with respect to the condition of vegetation, the condition of the public roads, soil and general physical conditions of the territory adjacent to Ducktown, Tennessee, with special reference to the effect upon said conditions, if any, by the sulphur smoke from the copper operations.

Affiant and said Nason were in said territory for several days, and took particular occasion to make observations with respect to the injury, if any, now being done upon said vegetation, roads, soil, etc. After careful observations, it was the conclusion of the said Nason and this affiant that no injury whatever is now being done. It was the opinion of this affiant and now is affiant's opinion, that the roads are in as good condition as they were during the time testified to by this affiant in his affidavit of November 17th; that the streams have not been affected; that the soil is not affected and that there is no evidence of further injury to the vegetation. Affiant states that his particular attention, and the attention of said Nason was called to the conditions, and that the observations made were made carefully and in view of the fact that the above mentioned suit involving those questions was at that time pending. During this trip affiant drove about thirty-five miles along the public roads in conveyances through the territory above mentioned at distances of from five miles to twenty miles from Ducktown. Affiant heard no complaints with respect to any further injury to timber, and could see no visible effects of any continuing injury.

CHAS. A. WELLER.

Subscribed and sworn to before me this 7th day of April, 1906.

J. G. JOHNSON, Notary Public.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, Robert S. Wetmore, who, being first duly sworn herein, upon his oath did say: That he is fifty years of age and is a resident of the City of Knoxville, Tennessee; that he is a commercial traveler and that his business compels him to travel in the States of Kentucky, Tennessee, Virginia, North Carolina, South Carolina and Georgia, and that incident to his business he goes to the Ducktown Mining District in Polk County, Tennessee; that he has been acquainted with the Ducktown District for fourteen years, having during that time regularly made trips to that district.

Affiant further states that from his knowledge of the character of the country, of the values of the timber, and of the condition of the soil that there is no place within the territory South of the Ohio River with which this affiant is acquainted where as little injury, if any, would be done by the operations of the copper industries as is done at Ducktown; and in this affiant's opinion, from his knowledge of the territory adjacent to Ducktown, and from his knowledge of other territories in the South the Ducktown District on account of the lack of fertility of its soil and of the fact that the land is in no sense an agricultural

land, is the logical situation for the working of the minerals of the country and is the place best adapted for the treatment of the ores.

Affiant further states that he has visited the Ducktown District in the springtime in different years for several years past; that he has taken particular notice of vegetation on his various trips; that he has in April, 1906, made a trip through parts of the Ducktown District and that he observed that the vegetation is apparently further advanced, greener and in better condition and greater in volume at this time than it was at this season in the year 1905 or that it has been for previous years at the same season of the year.

ROBERT S. WETMORE.

Subscribed and sworn to before me on this April 13th, 1906.
(seal)

G. G. HYATT,
Notary Public, Polk County, Tenn.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
County of Knox. }

Personally appeared before me, the undersigned, a Notary Public in and for Knox County, State of Tennessee, Howard Cornick, who, being first duly sworn herein, on his oath did say:

I am one of the attorneys of the defendant Tennessee Copper Company, and have been one of its attorneys since its organization. I represented it when the suit was brought in this court against it by the State of Georgia, which was afterwards dismissed, stipulation having been filed as set out in the bill. It had been claimed by the Georgia officials prior to that time that the damage was being done to the property of citizens of Georgia adjacent to the works of the copper plants by reason of the smoke and fumes from said plants, and it was claimed by them that the source of the damage was what was then known as the "open heap roasting." The ore at that time before being placed in the furnaces was roasted in large open heaps and the smoke given off from such roast piles was diffused into the atmosphere at a very low elevation, in fact immediately upon the ground, and being blown about and over the adjacent country undoubtedly did some damage to vegetation, although nothing like the damage claimed in the extravagant statements of that bill.

When this suit, No. 13, was brought in this Court in October, 1905, and when the case was set for hearing on December 4th, 1905, I went to Washington for the purpose of assisting in the trial of same, and had with me a large number of affidavits which I proposed to submit on behalf of the defendant in resistance of the plaintiff's motion for a restraining order. I met Judge Hart, Attorney General for Georgia, at his room at the New Willard Hotel on the day before the case was set for hearing, and gave him a copy of these affidavits. I called his attention to the fact that his bill was filed upon a totally erroneous state of facts in this, that the basis of his suit was that the new stack contemplated to be constructed as part of the general scheme for green ore smelting had been completed and put in operation and had proved a failure, and in fact had increased the damage, whereas the fact was that this high stack had never

been completed, that it had been planned and the contract let for its construction, but that owing to unforeseen troubles arising from labor conditions and otherwise that the new stack construction had proceeded no further than the partial erection of the large flue necessary to connect it with the furnace, and that the stack itself had been erected to a height of only about sixty-two feet above its base, the entire height of the proposed stack as planned being 325 feet above its foundation, which is 112.5 feet above water level of the river adjacent to the stack. I showed him photographs of the stack in the shape it then was, showing by red lines its proposed height when completed, and told him that the stack theretofore in use was simply a temporary stack, which was used to abridge over the time between the actual abandonment of the open heap roasting and the time when the entire new scheme should be put in effect at the completion of the new stack. He was very much surprised at this statement, said that he had been entirely misled in the matter, that his opinion was that the stack had heretofore long since been completed, and was in operation, and that the effect of its use was to largely increase the spread of damage. He said that under the circumstances he was placed in a very embarrassing position, and that he was not ready for trial, and asked that the matter be continued until some future date. He said he had no intention in the world of trying to harrass these companies, and did not want to be put in the attitude of harrassing them with this litigation, and certainly believed that they had had full opportunity to test the methods of operations adopted at the instance of the plaintiff, and it was thereupon suggested by me that the case be continued until later in the summer of 1906 to the end that it might be seen what effect, if any, the erection and placing in operation of the new stack might have. It was exmplained to Judge Hart at that time that the four new furnaces in process of construction were a part of

the general scheme, that they were being erected along with the new stack so that the smoke from them would be turned into the new stack upon their completion and placing in operation. It was thought at that time that the new stack would be completed and placed in operation by sometime in January, 1906. Judge Hart stated that he did not want to make a definite continuance but that he would like an indefinite continuance to be had, providing that neither side might call up this case prior to January 15th, 1906, it being contemplated that said new stack and furnaces would be completed and in operation by that date, but after January 15th, 1906, that either side might call the case up for hearing upon 30 days written notice to the other.

On account of further delays the new furnaces and stack were not completed and put in operation until the latter part of March or first of April, 1906, at which time they were completed and were placed in full operation by the Tennessee Copper Company, and affiant is advised that so far as can now be ascertained the said new stack is meeting the full expectations of said Tennessee Copper Company and of all the experts who planned this stack. These new furnaces and said stack now in use have been in said interval of time completed by defendant Tennessee Copper Company at the total expense, as this affiant is informed and believes, of more than one hundred and fifty thousand dollars, and this completion was with the knowledge and acquiescence of the officials and attorneys of the said State of Georgia.

HOWARD CORNICK.

Subscribed and sworn to before me on this 14th day of April, 1906.

EDWARD HACKER,

(seal) Notary Public, Knox County, Tenn.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF NEW YORK,
County and City of New York.

Personally appeared before the undersigned authority, J. Parke Channing, who, being duly sworn herein on oath, says that he is a citizen and resident of the City of New York and State of New York; that he is a graduate of Columbia University, in the City of New York, from which he has received the degree of Engineer of Mines; that he has been engaged in the practical mining and treatment of copper ores for the last twenty-one years, during which time he has kept himself informed of the state of the art, has made many improvements in methods, has written on the subject, and has been called upon to and has delivered lectures on the subject at the leading universities and technical schools of the United States; that he is President of the defendant Tennessee Copper Co.; that as president of said company he is acquainted with the history of the company, with the conditions existing in the vicinity of the plants and operations of that company in Polk County, Tennessee, and that he is familiar with the negotiations which have been had between officials of the State of Georgia and the Tennessee Copper Company with respect to the operations of said Tennessee Copper Company.

Prior to February 9th, 1904, affiant had received word that some of the officials of the State of Georgia were making complaint that some injury was being done to property in Georgia by the operations of the Tennessee Copper Company and the Ducktown Sulphur, Copper & Iron Company, Limited, in Polk County, Tennessee, claiming that the gases and smoke from such operations were blown by the winds across the State line between the States of Georgia and Tennessee into the State of Georgia. At that time the process used by the Tennessee Copper Company in the treatment of its ores was known as the "open heap roasting process," and in the treatment of the ores by the Tennessee Copper Company the ore as taken from the mine was placed in large heaps at convenient points, and there ignited. The result of this ignition was that the sulphur contents contained in said ore was burned off, and in the burning of said sulphur, gases were formed which, mingling with the atmosphere, at a low elevation, were blown by the winds around and over the country adjacent to said roast heaps. Within a short time prior to February 4th, 1904, the Ducktown Sulphur, Copper & Iron Company, Limited, that being the other company operating in Polk County, Tennessee, had ceased this process of roasting which up to that time was the only method known to the art, and was experimenting with a process by which these ores were smelted in the furnace as they came from the mines without roasting, this process being known as "pyrite smelting."

This affiant, representing the Tennessee Copper Company, together with Mr. W. H. Freeland, General Manager of the Ducktown Sulphur, Copper & Iron Company, Limited, went from Polk County, Tennessee, to Atlanta, Georgia, on or about February 9th, 1904, and there conferred with the officials of the State of Georgia. It was then believed by this affiant and by the officials of the State of Georgia that abandonment of the

open roast heap method would relieve the complaint and prevent any sort of injury, and in consequence thereof a letter was written, signed by this affiant and by Mr. Freeland, dated February 9th, 1904, and addressed to Governor Joseph N. Terrell, Atlanta, Georgia, a substantial copy of this letter appearing as an exhibit to the argument for the plaintiff on application for leave to file bill and for restraining order in this cause. This letter represented that both copper companies would cease roasting and would not again return to that method of treatment of the Ducktown ores. As a result of that conference had between this affiant and Mr. Freeland on the one side, and the officials of the State of Georgia, on the other, the suit which had been filed by the State of Georgia against the State of Tennessee and both copper companies in the Supreme Court of the United States, at the October term, 1903, being original cause No. 14, was dismissed, and the open heap roasting was abandoned. A substantial copy of the agreement to abandon the open roast heap process and to dismiss the cause appears at page 11 as an exhibit to the argument for leave to file bill and for restraining order in this cause.

After the abandonment of the open heap roasting, as aforesaid, and in order to comply with both the letter and the spirit of the stipulation entered into as between this company and the officials of the State of Georgia, as above set out, affiant determined to erect a high stack to carry the smoke and gases emanating from the smelting of the ores and discharging them at such a high point above the earth that they would be so diluted with air and disseminated before they came back to the earth again that any possible injury might be prevented, and to that end he consulted with the most eminent experts which he could find, and it was determined by them that this end could be best accomplished by the erection of a stack which would be three hundred and twenty-five feet high, the base of

the stack being ninety feet above the water level of the adjacent country, the elevation above the water level therefore being four hundred and fifteen feet.

Representations to this effect were made to the Georgia officials and were acquiesced in by them, and in furtherance of this idea contracts were let by the Tennessee Copper Company for the building and completion of said stack as quickly as possible, but labor conditions in the country adjacent to the copper operations in Polk County, Tennessee, prevented the completion of the stack by that date, and in fact at the time the bill in this cause was filed said stack had not been completed but was in process of construction, a large flue necessary to connect the furnaces with the stack, being about 750 feet in length and having been completed and the stack erected to a height of some sixty-two feet above its base. This work necessitated careful civil engineering and planning and called for several changes before its satisfactory completion.

After the abandonment of the open heap roasting method, as aforesaid, and prior to the completion of this high stack above referred to, the smoke and gases emanating from the smelting plant of defendant copper company were carried through a temporary stack or chimney one hundred and twenty feet in height. This stack was being used as a temporary method to do away with the open heap method while the new stack was being erected. This 120 foot stack was the one which was in operation after the abandonment of the open heap roasting and down to about 1st of April, 1906, about which time the said 325 foot stack was completed by the Tennessee Copper Company and placed in operation, and is the only stack now in use by said Tennessee Copper Company. So that the report by Alfred K. Chittenden filed as exhibit "F" to the original bill in this cause is based upon an erroneous conclusion when, on page 34, the statement is made that "the tall chimneys now in

use at the copper works were erected with the idea of abating the smoke nuisance." Mr. Chittenden was evidently under the impression that the tall chimney which the company had in contemplation when it abandoned the open heap roasting method had already been erected at the time he made his report, which was not the fact.

A new bill having been filed in this Court and a rule to show cause why restraining order should not be granted having been made, returnable December 4th, 1905, and the demurrer of the Tennessee Copper Company having also been set for hearing upon said date, affiant together with the attorneys for the Tennessee Copper Company went to Washington, and on the day before this cause was set for hearing in this Court, as aforesaid, had a conference with the Attorney General of the State of Georgia at the New Willard Hotel, in Washington, D. C., at which time the foregoing facts with reference to the building and completion of said new stack were made to appear to him and it was demonstrated to him that his bill was filed upon an erroneous conclusion of fact in that the bill proceeded upon the theory that the new stack had been erected and had proven a failure, whereas as a matter of fact said new stack had never been completed or attempted to be put in operation at all up to that time. Thereupon it was suggested by said Attorney General for the State of Georgia and agreed to by this defendant that the further hearing of this cause should be continued to some later date, to the end that the Tennessee Copper Company might have ample time to complete and put into operation its said new stack and new furnaces to be used in connection therewith, and it was thereupon agreed by the parties to this cause that said hearing should be continued indefinitely provided that the Tennessee Copper Company continue with the erection and completion of said high stack. Thereupon the said Tennessee Cop-

per Company proceeded with said work of erecting said high stack with all possible dispatch, but having encountered some unforseen and unavoidable delays was not able to complete same until about April 1st, 1906, at which time it was completed and was placed in operation. The four new furnaces referred to in the complainant's bill in this cause had not been completed at the time the original bill was filed, it being the intention of this affiant to place them in commission at the same time that the new stack above referred to was placed in operation. The said new furances and new stack were all part of one general scheme and improvement, the plan being to erect the stack in connection with the erection and placing in operation of the furances and at the same time to turn into the new stack at its completion all smoke emanating from the old furnaces already in use. All this was thoroughly gone over with the Attorney General for the State of Georgia at said conference and the completion of said improvements was agreed to and acquiesced in and the cause indefinitely continued, as per stipulation filed in this cause.

After said conference in Washington aforesaid the Tennessee Copper Company, pursuant to the agreement there made, proceeded at considerable expense to build its stack and furnaces and to complete said improvements and put them in operation, and not until the latter part of March or 1st of April, 1906, could these improvements be completed and placed in operation on account of labor conditions and some necessary and unforseen changes and delays. At the present time said new stack and said new furnaces are in full operation and use by said Tennessee Copper Company and no other stack is being used or intended to be used for carrying off the smoke from said plant.

From reports received by this affiant the use of said new stack has completely remedied any ground for complaint, and

so far as this affiant has been able to ascertain there has been no complaint by the citizens of Georgia, or other persons since the new stack has been placed in commission, as above stated, as shown by other affidavits in this record.

In order that said stack might be erected in the most approved and skillful manner its erection was placed under the supervision of an expert who had received his training in the Royal Technical Institute of Chemnitz, Saxony, German Empire, who was fully familiar with the requirements and regulations of the Prussian and Saxony Governments with reference to the erection of similar stacks, and said stack was thus erected under the supervision and after and upon calculations of said expert as stated by said expert in his affidavit which is in this record.

The Tennessee Copper Company purchased its property in Polk County, Tennessee, in the year 1899, and began the erection of its smelting plant in 1900, began roasting in May, 1901, and began smelting in August, 1901, at the same point where the smelter plant is now located, which point is about one-half mile distant from the state line between the States of Georgia and Tennessee. Said Tennessee Copper Company has never moved its plant from said original location, and is still operating the same plant at the same point where the first operations were begun by it. So that Mr. W. S. Yeates, in his affidavit filed as an exhibit to the argument on application for leave to file and for restraining order, on page 18 thereof, is mistaken in his statement that "The investigation of 1905 discloses that the Tennessee Copper Company, from whose work the major part of the damage arises, had removed its smelting plant to a point much nearer to the Georgia State line." And the affidavit of John M. McCanless, filed as an exhibit to the argument on application for restraining order, is erroneous when it states on page 14 that "The Tennessee Copper Com-

pany, which generates the major portion of the gases liberated had removed its plant to a point much nearer the Georgia line." And Mr. T. G. Hudson, in his affidavit filed as an exhibit to the argument on application for leave to file and for restraining order in this cause, is mistaken when, on page 20, he states that "The Tennessee Copper Company has recently removed its reducing plant to a point some miles nearer the Georgia line than its former location, and the gases being concentrated and discharged from a tall chimney are carried much further into Georgia territory than they could have been formerly under the open heap process of reducing ores." And the bill in this cause is evidently filed under a misapprehension of the facts when, in paragraph 21, on page 10 thereof, the statement is made: "The Tennessee Copper Company removed its roasting and reducing plant from a point several miles within the State of Tennessee to a location only about a quarter of a mile from the Georgia line." All of these statements are in error because of the fact that there has been no such removal.

Affiant further states that copper was discovered in Polk County, Tennessee, about the year 1849, that operations have continued for copper almost continuously down to the present time, excepting between the years 1879 and 1890, and that the Tennessee Copper Company, and its predecessors in title, have operated for copper for more than forty years in that district prior to the date of the institution of the suit in this cause; that the Tennessee Copper Company itself has been operating in that district since the year 1900; that said company has spent many hundreds of thousands of dollars in the purchase of its property and in the erection of its plants with the belief that it would not be molested by the State of Georgia, nor its officials, nor the people of the state, relying upon their acquiescence in the operations of the copper properties in the Ducktown Dis-

trict, in Polk County, Tenneesee, for the many years during which said operations had been in progress.

Affiant further states that the statement made on page 6 of the argument in support of and application for preliminary injunction is incorrect in the statement that "The Tennessee Copper Company smelts about four times the amount of ore used by the Ducktown Sulphur, Copper & Iron Company, Limited, and that if the new furnaces are allowed to operate the Tennessee Copper Company will have about ten times the capacity of the Ducktown Copper Company." The facts are that the Tennessee Copper Company at present is not smelting twice as much as the Ducktown Company, and that when its enlarged plant is in operation its total smelting will not exceed, if equal, four times the amount treated by the Ducktown Company.

Affiant further states that the argument on application for restraining order is in error when, on page 8 thereof, the statement is made that "The original incentive for the installation of the furnace process was not the hope of eliminating the sulphur dioxide, but to accomplish in the production a saving of not less than one cent per pound on copper," the fact being that the original incentive was that the method as used might be so changed as to satisfy the complaints of the Georgia officials, and it was believed not only by the officials of the Tennessee Copper Company, but by the officials of the State of Georgia that the change would be most beneficial.

Affiant further states that from a careful study of the conditions at the Tennessee Copper Company's plant, and from his knowledge of the results achieved by tall stacks at copper plants in various portions of the world, as well as from the actual operations of the present satck, he is of the opinion and firmly believes that the new 325 foot stack, now in use, will entirely prevent any ground for complaint of injurious effects

from the gases produced in the smelting of the Tennessee Copper Company's ore.

That after reading the affidavit of Robert R. Maffet in this case he undertook to investigate the statements made therein regarding complaints made by shipping interests in and around New York Harbor for the purpose of finding out whether the building of the 365 foot stack as referred to by the said Robert R. Maffett had cured the evils complained of. For this purpose affiant visited Washington and interviewed the various officials connected with the War Department who showed him the records pertaining to the case, among others being the annual report upon the supervision of the Harbor of New York, New York Supervisor, John C. Freemont, Lieutenant Commander U. S. Navy, being Appendix VV of the annual report of the Chief of Engineers for 1899, and upon pages 3287 and 3288 of the above mentioned report he found references to the particular complaint referred to. He further examined House of Representatives Report No. 478 to accompany H. R. Bill 8777, 56th Congress, First Session, and carefully examined the complaints and letters thereto, the result of which examination satisfied him that at the time of these reports, to-wit: in the years 1899 and 1900, the Orford Copper Works was evidently giving off sulphur dioxide so close to sea level as to seriously obstruct navigation. Affiant could find no records in Washington bearing upon this case after the year 1900, although he interviewed General Oliver, Assistant Secretary of War, and General Alexander McKenzie, Chief of Engineers.

Affiant thereupon proceeded to New York City and interviewed Commander H. H. Hosley, U. S. Navy, Superintendent of the Harbor of New York, at his office on Whitehall Street in New York City. Commander Hosley stated to affiant that while he was not in charge of the Harbor during the time that smoke was complained of, at the present time the smoke which

is discharged from the stack of the Orford Copper Works in no way interferes with navigation and that his records show that there are no complaints on file and that none have been filed since the year 1901. Affiant further interviewed John J. O'Mara, one of the Deputy Inspectors for the Supervisor of New York Harbor, and the said O'Mara advised him that he had been an inspector for the past eight years, and was an inspector at the time complaints were made in the years 1899 and 1900; that his residence is at New Brighton, S. I., County of Richmond, State of New York, and from his own knowledge and personal inspection the erection of the 365 foot stack by the Orford Copper Works has evidently eliminated all complaint as to the gases from their works both as regards the shipping interests and the inhabitants of Richmond County, New York.

Affiant further states that he makes the foregoing statement because he is informed and believes that the regulations of the War Department will not permit of its officers or employes making affidavits in suits with which they have no direct interest or in which they have not been specifically subpoenaed as witnesses, and affiant further states that the above remarks and conversations as reported by him are accurately stated.

Affiant further states that the present methods of manufacturing copper by the Tennessee Copper Company are according to the highest known state of the art, that every improvement has been used which has been fund to be in any way practicable or feasible.

It has invariably been the object and the practice of the officials of the Tennessee Copper Company to exercise every precaution known to the arts in order to avoid any possible grounds for complaint of injury from the fumes emanating from the plant, and everything has been done within the power

of the officials of the Tennessee Copper Company regardless of expense to satisfy the complaints of the citizens of the State of Georgia as well as the complaints of any other person claiming to be injured.

J. PARKE CHANNING.

Subscribed and sworn to before me this 13th day of April, 1906.

(seal) ERNEST W. BROWN,
Notary Public, New York Co., N. Y.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by its Attorney-General*, JOHN C. HART, *Plaintiff*,

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants*.

No. 13.

STATE OF NEW YORK, *County of New York*, } ss.:

Personally appeared before me, the undersigned authority, B. E. Fernow, who being first duly sworn herein on oath, says:

Affiant is a forester by profession and now is established as Consulting Forest Engineer, having acquired his technical training in the Prussian forest schools and forest department. He has been chief of the United States Division of Forestry for twelve years, and Director of the New York State College of Forestry for five years. He has been for fifteen years Secretary and Chairman of Executive Committee of the American Forestry Association, an association formed to secure the preservation and rational use of our timber resources, and is now Vice-President at large of that Association. As life member of the American Institute of Mining Engineers, at one time employed at a blast furnace, he is also acquainted with the general features of furnace practice, has visited many works using sulphuric ores, and has studied the methods of pyritic smelting.

Affiant states that he has examined the conditions under which the operations at the smelter of the Tennessee Copper Company are carried on with a view of forming an opinion or determining whether or how far the newly erected chimney or smokestack is likely to obviate damage to the surrounding vegetation, and also to express an opinion on the question of the extent of damage formerly done.

The works are extensive, of modern type and are run in approved manner. They are situated in a hilly basin, surrounded by mountain ranges which encircle it at a distance of five to ten miles from the works with elevations ranging between 2,400 to 4,000, or about 1,000 to 2,500 feet above the site of the plant.

The surroundings of the smelter for an area of between three and four square miles have been deforested long ago. Having personally observed the stumps remaining, all of which show that they have been cut long ago, and being familiar with the history of the region as given by Mr. Heinrich, formerly manager of the Pittsburg & Tennessee Copper Company, with whom I had personal acquaintance, I know that this deforestation had been accomplished for the most part some twenty-five or thirty years ago, the wood having been used as charcoal in the roasting of the ores, and otherwise.

The mountain slopes facing the valley have also for the same purpose been culled of nearly all timber of value, and are either second growth, or present the ragged appearance usual to tracts lumbered in the slipshod manner of the country.

That a statement that "all vegetation is killed by the fumes," cannot even in the neighborhood of the works, be maintained is proved by Exhibit "A," a photograph of a garden in the Town of McCays, containing thrifty apple, peach and plum trees, spiraeas, privit, yucca, and other shrubbery, one-half mile

of the smelter and in no way particularly favorably situated. Within a mile of the smelter and beyond, more such proofs were had, and within three miles a forest growth containing a large proportion of yellow pines testifies that even this sensitive species can maintain itself at that distance.

As a matter of fact the appearance around the Ducktown furnace and mines looks little different from the surroundings of many of the Pennsylvania coal regions, where mere occupation by a thoughtless population with the incident wood cutting, burning, grazing and disregard to pleasant surroundings, has produced the same result.

On another occasion, last summer, I made a visit of three days to the region, during which I traveled by wagon and on foot, for one day over the country in the immediate surroundings of the furnaces, and for two days in the woods between Ellijay, Georgia, and Ducktown, where the country some fifteen to twenty miles south and southeast from the smelters was inspected. From several mountain tops and trees climbed, a very considerable area of territory was seen by me.

I have seen nothing in the more distant districts that could give rise to the general and extravagant charges contained in Sections 12, 13 and 14, of the Original Bill of Complaint, and in the various arguments and exhibits accompanying it; especially the statements in Exhibit "G" seem to me misleading as to actual conditions, as well as to expectations. All I have seen at the distant points, are single dead trees or trees with dead or damaged foliage, such as might exist from a number of causes. While I do not deny the possibility that fumes may have been the cause, or a contributing cause, it would require very positive proof for me to accept such diagnosis. It is always difficult to determine the cause of the death of trees, more so than of animals or men, and as the noted expert on smoke

damage, Reuss, declares, the proof of damage by smoke is the most difficult. Certainly, the existence of such dead individuals had by no means so interrupted the general forest cover at any place over the many square miles traveled and seen, as to permit the inferences of damage to soil and water conditions made in the pages of the bill cited.

In addition to the inspection on the ground of a considerable area supposed to be under the influence of the fumes, I have also observed conditions for many miles from the car windows and from these observations conclude that the effect of the fumes is not followed by as dire consequences as represented in the bill, arguments and exhibits.

The bill, arguments and exhibits deal mostly in broad generalities and admit, therefore, no other than general argument in refutation. The worst generalization is that regarding the influence of forest destruction on soil and water flow. This argument is misleading and has been most baneful to the interests of true economic forestry; it has been most frequently abused for the purpose of arousing popular sentiment on behalf of forest preservation, turning a sober economic business proposition into a popular fad.

While the general truth of the relation between forest cover and the stability of soil and waterflow cannot for a moment be denied—and I have used the argument freely in the many years of endeavor to commit the people of the United States to more conservative forest use—yet, it must not be overlooked, and I have repeatedly accentuated the fact, that it is improper to generalize on this relation, other than forest conditions contributing to vary the relation in each locality; and it should be especially understood that it is not the trees that exercise the greatest influence, but the immediate soil cover of underbrush, litter, foliage, moss or other lower vegetation,

and the tangle of roots are the essential factor in this relation. Hence, not only a partial use, but the entire removal of a forest growth may, except in the steepest places, not produce any evil consequences, provided the lower soil cover and underbrush is not also destroyed by fire or otherwise, or reproduction to replace the old growth is not prevented. The proof for this proposition is to be found in all European forest administrations, which are not by mistaken philosphy or foolish sentimentality prevented from utilizing to the fullest extent their forest growth, and do so without endangering their soil and waterflow.

If, therefore, a partial destruction were found to be a result of the fumes, the damage in loss of material to private property may be large enough to become a matter for redress, but the apprehensions of graver consequences to soil and water which concern the community at large may not at all be justified. Different kinds of vegetation are variously resistant to damage by fumes. Even in the immediate vicinity of the furnaces, a species of grass, some vines and several species of trees, have, as shown before, been able to resist the influence. A larger number are able to do so as the distance increases, and the fumes are diluted. Since the forest of the region is a mixed forest, soon a sufficient number of species and individuals is found resistant to assure a persistent forest cover, if other causes of destruction are kept away. The forest as a whole can stand a certain amount of SO_2 without suffering damage; and, as will appear further on, this amount has, by Stockhardt's experiments been shown to be very much less than claimed by the complainant.

Whatever damage is done at a distance beyond the nearest hills, can only be partial and can never lead to such destruction of the forest cover as is wrought by axe and fire, both of

which agencies are here at work without let or hindran by State law or public sentiment. On my short trip I had a opportunity to see that fires had not infrequently damaged th soil cover, the important factor in waterflow, and during m present visit forest fires in every direction were filling the ai with smoke and revealed the real enemy of the forest. N interference with this most destructive and useless practice is even suggested by the State of Georgia, and certainly no objec tion would be raised by the State if clearings for farm use were made on these mountain slopes, yet the effect would be precisely the same or perhaps worse, than those produced by clearings from other causes or motives.

The deciduous trees are not only generally more resistant but in the leafless condition are probably entirely immune, as the damage seems to be done through the foliage. The forest of this region is almost entirely composed of deciduous trees and hence anticipation of wholesale destruction is not well-founded.

It should be understood, that discolorations of foliage are under normal conditions a frequent occurrence, being produced by a variety of causes, as by fungous growth, insect depredation damage by hail, etc. Such injuries are not necessarily rea damage to the tree or causes of death, the damaging remaining local and sufficient foliage area remaining intact to keep th tree alive, and new foliage each year repairing the damage.

Even where discoloration has been produced by fumes, such discoloration does not necessarily indicate or produce deteriora tion of the timber value of the tree.

Being familiar with the extensive literature on damag by smelter fumes, and with the careful investigations mad especially by French, Belgian and German investigators, I hav been requested to express my opinion as to the distance fro

the source to which damage by sulphurous fumes may be anticipated. Exast knowledge as to the behavior of the fumes in their passage through the air is not much developed, but it is generally known that the distance and degree of damage depends on a variety of conditions, especially those which promote the dilution of the gases with pure air.

To determine what under present conditions might be the likelihood of damage I have for four days observed and examined the works, and especially the behavior of the fumes omitted from the new chimney. My examination was favored by weather conditions inasmuch as each day showed differences of wind direction, wind velocity and humidity, the last day being accompanied by heavy rain. Only during one day, the first, were the fumes thrown into the direction of the State of Georgia. In spite of the steady winds prevailing on this day a great many variations occurred in the visible column of fumes, as the pictures taken under my direction show; sometimes every few minutes a change occurred, but in one respect the cloud behaved almost invariably in a similar manner, namely, before traveling into the country it reached a much higher altitude than that of the mouth of the chimney (whose height is 325 feet above its foundation, 437.5 above water level). This altitude, varying between 600 and 1,000 feet above river level, is reached by direct vertical ascent when the air is calm as at night, and sometimes in the day time, or by a more or less rapid angle of ascent, the smallest having been computed at 8 degrees. Accordingly the final height is attained at varying distances from the chimney, but usually within the first quarter mile. In other words, the point of distribution of the gases must be placed at an elevation of not less than 600 feet above ground, which is most important with reference to the dilution. Following the direction of the smoke column the cloud soon

begins to spread out and upward, floating similar to coal smok sometimes visible to a height of 2,000 feet (estimated). T cloud becomes broadly diffused within a half mile, and at t or three miles from the sources the visible portion has vanish

Unfortunately, the chemical apparatus was not availabl and the pictures taken at a distance during the first day, whe the wind was steady from the northern quarter, miscarried but I can state that at a distance of less than two miles fro the chimney the outline of the cloud above could hardly b defined and at two and a half to three miles distance no vestig could be seen, and at either distance, right within the path o the fumes, no smell disclosed the presence of gases. Picture taken the second day from various points (Exhibits 1, 2, 3) when the wind was variable but mostly from the south and east still illustrates the same conditions, and showed that a least the visible portions of the fumes do not, as has bee claimed, keep together in solid column for longer distances tha lower chimneys do.

The visible portion of the fumes, however, is not or prob ably not the deleterious one, it only gives an indication of th probable behavior of the invisible gases.

To answer the question as to probable damage, we mus come to a conception of what takes place in the visible ga column, and we must also enquire into the question of th admissible limit of gas in the air, which in turn calls for a consideration of the manner in which vegetation is damaged

Actual knowledge as to these questions is poorly develope and we have to deal largely with theories. There is by n means agreement among authorities even as to the last tw questions, and only the more plausible theory which corre sponds best to facts and known laws can prevail.

As to what degree of dilution makes the presence of th deleterious gases innocuous much has been written.

In the burning of coal for domestic use, on the average at least one per cent. of sulphur is found liberated as SO_2, and this percentage may increase to 8 and even double that amount, and is allowed to fill the air in densely populated districts. In such civilized places as New York, Philadelphia, Pittsburg, large amounts of gases must be so discharged and are allowed to be so discharged without interference by the authorities.

In strange contrast to the practical figures, which in the laws and regulations of European governments are prescribed as sufficient dilutions, is the statement of authorities (Schroeder and others), referred to by complainant, that one part in a hundred thousand inflicts great injury, and that even 1 in 1,000,000 is injurious. The strangeness vanishes if we investigate the basis for the assertion. It is based upon laboratory experiments which in no way, physically or chemically, represent conditions in the open air. These chemists overlook that the plant in these experiments is deprived of defense by the removal from the natural conditions of its functions; that sulphurous anhydrid in the nascent state, as employed in these experiments, is much more highly corrosive than the same substance under the conditions in which it is found in the fumes; and that much of the sulphur dioxide traveling through the air is changed into the less active trioxide. Moreover, it should not be overlooked that these experiments were made on the most sensitive species of tree, such as does not exist at all in this region, namely, the Norway Spruce, and the results even if they were practically correct can by no means be applied to other species.

Stoeckhardt, who is the recognized first authority in this field and whose experiments laid the basis for all future experiments, found that deciduous trees, treated in a covered glass case, *i. e.*, under conditions unfavorable to the plant, with a

mixture of 1 in 50,000 for weeks had no effect whatsoever, an even stronger mixtures (1 in 30,000 and 1 in 20,000) repeatedl applied, had no effect.

It is evident that the question of admissible degree of ac mixture is still unsettled, but, deducting from Stoeckhardt' experiments, it is also evident that where deciduous forest i concerned a dilution reduced to 1 in 20,000 or even less may b considered entirely safe, when trees growing under natural con ditions are under consideration.

Chemical tests of the gases in the air which were mad under my supervision showed that with the high chimney i operation the actual dilution to this safe degree is attained withi a very short distance from the chimney, and that the diffusio progresses at a very rapid rate with the distance, so that eve the dilution of 1 in 100,000, unscientifically claimed to be injur ous, is soon reached.

An experiment started on the last day of observation fo other purposes in the operation of the furnaces may, if the antic pated result leads to its adoption as a practice, also have bearing on the question of further dilution of the gases. It co sists in admitting at the base of the chimney fresh air whic would naturally tend to dilute the gases considerably before the reach the mouth of the chimney.

Incidentally, the question of the admissible proportion sulphur dioxide also involves the question of the manner which plants are injured. Although American chemists ha jumped to the conclusion that it is proved to be through t direct absorption by the leaves, the European experimente upon whose work they base this belief, do not go so far in the conclusions. They merely conclude: "In very general term one can from these experiments argue that damage of the plan by sulphurous or sulphuric fumes, will be already accompani

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by increase of the sulphuric contents of the foliage." (Hasselhoff and Lindau, p. 55.)

It must be at once admitted that in nature always complicated conditions prevail which make exact analysis difficult. Humidity, cloudiness, light intensity, velocity and erratic changes of air currents all introduce complications, but the well known laws and processes of diffusion of gases allow us to secure a tenable conception as to what takes place.

As to the composition we can only theoretically surmise that a very large per cent. of the gases consists of nitrogen (that of the air blast from which the oxygen has been taken to burn the sulphur, etc.), sulphur dioxide with possibly small additions of sulphur trioxide, oxide of zinc volatilized (from the ores under treatment) carbon and its oxides from the fuel, and probably sublimated sulphur, as the chemist of the works suspects. This latter conception is plausible, the solid sulphur particles in the fumes, forming analogously to the carbon in coal smoke, largely the visible portion of the fumes. This part reduces the sulphur available for gas formation by perhaps ten per cent. and is finally precipitated like the coal dust without detriment. It has been noticed by residents, and I have the same impression that the color of the fumes escaping from the high chimney is different from that which used to emanate from the lower chimney, which indicates difference of chemical constituents. There is no arsenic in the ore.

Of the chemical changes that may take place under the varying conditions of temperature and humidity we can hardly form tenable theories. The effect of the high chimney is to concentrate the heat, and the gases which at the base of the chimney show temperatures varying between 250 and 430 degrees F. arrive at the top probably not less hot, permitting chemical changes which would not be found in fumes from roast heaps or low chimneys.

If the gases at the mouth of the chimney still retain a te perature of say 250 degrees F., their specific gravity would less than air and they would rise by mere buoyancy unless p vented by the pressure of strong winds or of saturated Later, by the law of diffusion, the gases although heavier in part rise, that is, diffuse upward just as the heavier oxyg is found with the lighter nitrogen in all layers of air in sa proportion. It is therefore tenable to assume that only on half the gases emitted will be diffused downward into a regi where damage may be produced.

If the air could be presumed to be at absolute rest a absolutely dry, the gases to be generated at the mouth of t chimney and without any force acting upon them to give the a special impetus or direction, diffusion would at once ta place in all directions at a uniform rate in spherical progressi and zones of mixtures (air and gases) of varying strength wou be formed on a supposed level ground in concentric circ around the chimney as common center.

By virtue of the draft of the chimney possibly increased the blowing of air at the tuyeres, the initial starting point the diffusion is located higher than the chimney mouth, an hence each concentric zone at the base will be weaker in gas than it was before, the gases having traveled through a long distance, *i. e.*, through a larger volume of air.

In other words, the height of the chimney not only but t concomitant draft locates the initial point of diffusion highe and has the tendency to locate the zones of mixture of a giv degree nearer the chimney Humidity and chemical chang due to cooling, contact action, and solution, may change t composition but would not have any bearing on this factor distribution. Wind will have the tendency to change conce tric circles into concentric ellipses and to place the one foc

The height of the chimney and the extra height produced by the draught will send the smoke into higher air currents and remove it from the influence of local topography in this open basin, *i. e.*, the fumes will progress through wider strata of air and will be more rapidly diffused.

near the periphery. Nevertheless the height influence persists and locates the sides of elliptic zones of mixtures of a given strength nearer the axis of distribution, but tends of course to throw the fronts further forward.

On bright dry days, such as prevail with north winds in this region during the period of vegetation and which alone concern the contention of the State of Georgia, with the smoke columns rising as described, it is my opinion that the fumes which would naturally follow the direction of the Ocoee River will even in the gas column itself have lost all their strength long before they will strike the higher elevations of Long Mountain, the first in their path.

The amount of sulphur burned is, of course, also a factor to be considered in forming an opinion as to how far mixtures which might possibly become deleterious may be carried. It would be entirely misleading and unphilosophical to use this factor, as has been done by some chemists, for a mathematical calculation of the thickness of a blanket of sulphur dioxide covering so many square miles of space. Such calculations reveal misconceptions on the part of those who make them. As stated before, less than ninety per cent. of the sulphur in the ore is probably available for gasification, and one-half of this at least is diffused upwards into space, so that less than one-half the sulphur in the ores comes into consideration in the possibly obnoxious gases.

We could not make theoretical calculations of the rate of dilution as the smoke column advances. But all such calculations can only furnish a theoretical basis for conceptions of the probable behavior of the fumes. Actual chemical tests of the presence of gases in the air, such as referred to above, answer the question much more satisfactorily.

While I recognize the fact that the great variation and

complication of conditions contributing renders accurate prediction impossible, my conclusion is that the high chimney, placed as it is near the center of a wide open basis of six to ten miles diameter, and the fumes behaving as described, the gases will be diluted to a point of innocuousness within short distances from the works, and especially in the direction of the plaintiff's territory.

If I may be permitted to express a view of the general economic aspect of the present case, I would point out, that the industry represented in the utilization of the copper ores is of very much greater value to the country at large and even to the section in which it is carried on than the agricultural and timber interests of the territory which is affected. Most of this mountain country is of low agricultural value and the timber is also of only medium to inferior quality. Anybody at all observant would at once be impressed by the fact that a larger population finds profitable employment, and larger tonnage must flow to the railroads, and more useful products are furnished to the community at large by the Copper Company than all other interests combined which rely on soil culture or timber production could possibly produce. Long after the useful timber will have been removed by the lumberman, leaving behind him a useless waste or burn; the metal industry will persist to sustain the prosperity it has created.

B. E. FERNOW.

Subscribed and sworn to before me this 20th day of April, 1906.

(seal) HENRY B. THOMAS,
Notary Public, New York County.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF NORTH CAROLINA,
Transylvania County.

Personally appeared before me, the undersigned, a Notary Public in and for Transylvania County, North Carolina, C. A. Schenck, who being first duly sworn herein, on his oath did say:

That he is a professional forester, trained in two of the best German forest schools, having passed the requisite examinations to obtain the degree of Ph. D. and to be admitted to the German forestry service, to which he is still attached with the rank of Superior Forester;

That he has had sole charge, ever since April 1, 1895, of all forestry operations on G. W. Vanderbilt's Biltmore Estate, which estate comprises 130,000 acres of land in Western North Carolina;

That he has been head of the Biltmore Forest School at Biltmore, N. C., since 1897;

That he is a vice-president in the American Forestry Association and a director in the Hardwood Manufacturers' Association of the United States;

That at the instance of the Tennessee Copper Company he has examined, partly in person and partly through his assistants working under his supervision, in the most thorough, effi-

cient and comprehensive manner possible, the forests in the territory adjacent in all directions of the compass to the works of said company in Georgia, Tennessee, and North Carolina;

That this examination took place between the 28th of August and the 28th of September, 1905;

That this examination was made with the sole view to ascertain the true facts existing within the forests above mentioned, relative to the nature and the amount of damage due to sulphur fumes;

That the conditions thus and there ascertained are as follows:

I. Extent of Territory Under Observation.

"A" Within the State of Georgia and adjacent to the smelter works an area of 3½ square miles is treeless, extending one mile southward from the state line. I do not mean that this treeless condition is, purely and simply, caused by sulphur fumes. On the contrary, it clearly appears from many stumps and the axe marks thereon that the trees were cut and removed by man; and my information is that the trees have been cut and removed for fuel, charcoal and other purposes.

"B" Adjoining the treeless zone to the east and west and extending southward to a point situated at 2½ miles from the state line, 6¾ square miles of land show discoloration of trees.

"C" Adjoining the horn-shaped belt of land given under "B" to the east and west and extending southward to a point situated at 11½ miles from the state line, 124 square miles of land show partial, irregular and more or less discernible discoloration of foliage. I do not mean that the trees showing discoloration have either been killed or permanently damaged. Discoloration is any unseasonable appearance of the foliage that may be brought about by any one of a number of causes

(drought or frost, insects or fungi, forest fires, gases and fumes, external injuries).

"D" Outside of the territory described under "A," "B" and "C," which territory is entirely situated within Fannin County, no visible and unnatural discoloration of the foliage could be detected, although our examination extended within the State of Georgia about 14 miles beyond zone "C" in every direction of the compass.

II. General Conditions.

a. The territory under consideration belongs to the outskirts of the Great Smokies, the elevation above sea level varying between 1,500 and 3,000 feet (the latter altitude being reached at one point only).

b. The streams draining the territory described under zones "A," "B" and "C" form tributaries of the Toccoa river, which river, leaving the State of Georgia, winds its course in a northerly direction into and through the State of Tennessee.

Only one creek (which rises near Blue Ridge and runs southward, paralleling the L. & N. Railroad) finally joins the Ellijay river. Only eight square miles of its drainage basin belong to zone "C"—none to zones "A" and "B."

In the extreme northeast of zone "C" are found some small tributaries of the Notally river, which joins the Hiawassee on its way north.

c. The atmospheric and climatic conditions in the territory under observation do not seem to be changed by the presence of the smelters. Without doubt, the deforestation of about 25 square miles of land north of the state line has caused a slight decrease of atmospheric relative humidity in the immediate vicinity of the treeless zone, such slight decrease being invariably noticeable where the forest, cleared away for agricultural or other purposes, ceases to "irrigate the atmosphere."

d. The soil of the territory under observation is, generally speaking, fit only for such agricultural pursuits as subserve the resident population and notably the resident mining population. Deforested land is used, and best used, for stock grazing.

c. Within the wooded parts of the territory under observation, fire has played havoc with the trees, the bushes, the undergrowth and especially with the litter on the ground from which the water-regime of the soil largely depends. Forest fires, the curse of the whole Southern Appalachian region, are largely due to the lethargy of our legislators, to the negligence of the owners of woodland and to the desire of the population in general to use forest land, otherwise seemingly unproductive, for stock grazing. These disastrous fires can be attributed in no way to the presence of the copper industry, aside from the fact, that the latter creates an unusual conflux of population.

f. The damage within the territory under observation done to the trees of all species and of all sizes by forest fires is silviculturally and economically by far greater than the damage attributable to sulphur fumes.

g. The productiveness of forest soil, the quality of the timber, the vitality and sensitiveness of the trees have been badly affected by forest fires within the territory under observation, such fires being of very frequent occurrence.

h. In very few cases observed, forest fires have been prevented by watchful owners. In such cases, the humus and the undergrowth are well preserved.

III. The Woodlands.

a. The woodlands within the territory under observation, covering about 93 percentum of the same, are deficient in saw timber. Trees fit for the saw are so scattering that logging operations can not be conducted on a large scale at the present range of lumber prices. All of this woodland is land of very

small value, either for timber or other purposes as it is quite apparent not only that the timber is deficient and scattering but that the soil is sterile and poorly suited for any sort of agricultural purposes.

b. The trees can be used, have been used and are being used to supply fire wood for the homes of the settlers.

c. The large majority of the trees are small, branchy and short, having sprouted, after fires or after cutting for charcoal, from the stumps of parent trees.

d. The average number of trees per acre 13 inches or over in diameter breast-high is 3.9 or less than 4 trees per acre. Hardwood trees form the large majority of the stands, the various species composing the following average stand per acre:

Average Stand Per Acre of Trees 13 Inches and Over In Diameter Within Zones "B" and "C."

	Average number of trees per acre	Percentage of species in stand
White Oak	.40	10.00
Red Oak	.01	.25
Black Oak	1.80	45.00
Scarlet Oak	1.10	27.50
Post Oak	.09	2.25
Spanish Oak	.40	10.00
Chestnut Oak	.01	.25
Chestnut	.03	.75
Hickory	.01	.25
Poplar	.02	.50
Soft Maple	.01	.25
Black Gum	.05	1.25
White Pine	.01	.25
Pitch Pine	.06	1.50
Total	4.00	100.00

e. The hardwoods show a resistance to sulphur fumes far superior to that of the softwoods. During the leafless season, hardwoods can not be affected in the least by such fumes. Discoloration does not necessarily imply permanent injury.

f. A large number of observations prove clearly that the rate of growth of all trees within the territory under observation has not declined under the influence of sulphur fumes during the last years.

g. The increased death rate within the horn-shaped zone "B" is partly due to the fact that the vitality and power of reproduction of the trees have been, since many years, adversely affected by forest fires.

h. Dead hardwood trees have—for some time at least—the same fuel value which live trees would have.

IV. Public Roads.

The public roads suffer from erosion, wherever slow percolation underground has been changed, through the medium of any acts destroying the litter and the humus, into rapid surface drainage. The change of drainage, as much as there be within the State of Georgia, is in no wise ascribable to the action of sulphur fumes but solely due to the action of forest fires and to clearings made to supply wood, charcoal, trucks, hay, etc.

C. A. SCHENCK.

Sworn to and subscribed before me this the 9th day of April, 1906.

(seal) D. L. ENGLISH,
Notary Public.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me, the undersigned, a Notary Public in and for Polk County, Tennessee, Arthur H. Case, who, being first duly sworn herein, upon his oath did say: That on or about the 1st day of March, 1906, he took a photograph of the smelter plant of the Tennessee Copper Company, showing the old stack, the height of which is about 120 feet above its base, and also showing the new stack, the height of which is about 325 feet above its base. This photograph was taken before said new stack was placed in operation. The said old stack appears on the top of the hill near the background of said photograph. A copy of said photograph is made exhibit "A" to this affidavit. The said photograph shows the fumes and gases from the smelter plant of the Tennessee Copper Company as they then issued from the top of the old stack and also the fumes and gases as they then issued from the furnace tops immediately above the roof of the smelter building.

Affiant further states that thereafter in April, 1906, he made a photograph of the smelter plant of the Tennessee Copper Company showing both the new stack and the old stack with the smoke issuing from the top of said new stack and with no

smoke issuing from the top of said old stack. This photograph is made exhibit "B" to this affidavit.

Affiant also in April, 1906, made another photograph of said smelter plant of the Tennessee Copper Company, showing both the old and new stack, which photograph is made exhibit "C" to this affidavit.

Affiant further states that he is a citizen and resident of Polk County, Tennessee, and has been acquainted with the Ducktown Mining District since before the time that the Tennessee Copper Company began the construction of its smelter plant, and since the Tennessee Copper Company first began operations about the year 1900; that the works of the Tennessee Copper Company have not been removed from a point several miles within the State of Tennessee to a point nearer and adjacent to the Georgia State line, but that said works were begun and have been since operated at the same point as they were originally constructed.

Affiant further states that the old stack, the height of which is approximately 120 feet, has been abandoned by the Tennessee Copper Company, and that it is not now in use, and that no fumes nor gases are issuing from it. The new stack now in use is fully meeting the expectations had in the calculations made when its construction was planned. There are no complaints of the present method of use of said stack so far as this affiant has been able to learn; on the contrary, affiant states that all of the people seem to be thoroughly satisfied with present conditions and with the complete success of the new stack in preventing any ground for complaint.

ARTHUR H. CASE.

Subscribed and sworn to before me on this April 12th, 1906.

(seal) G. G. HYATT,

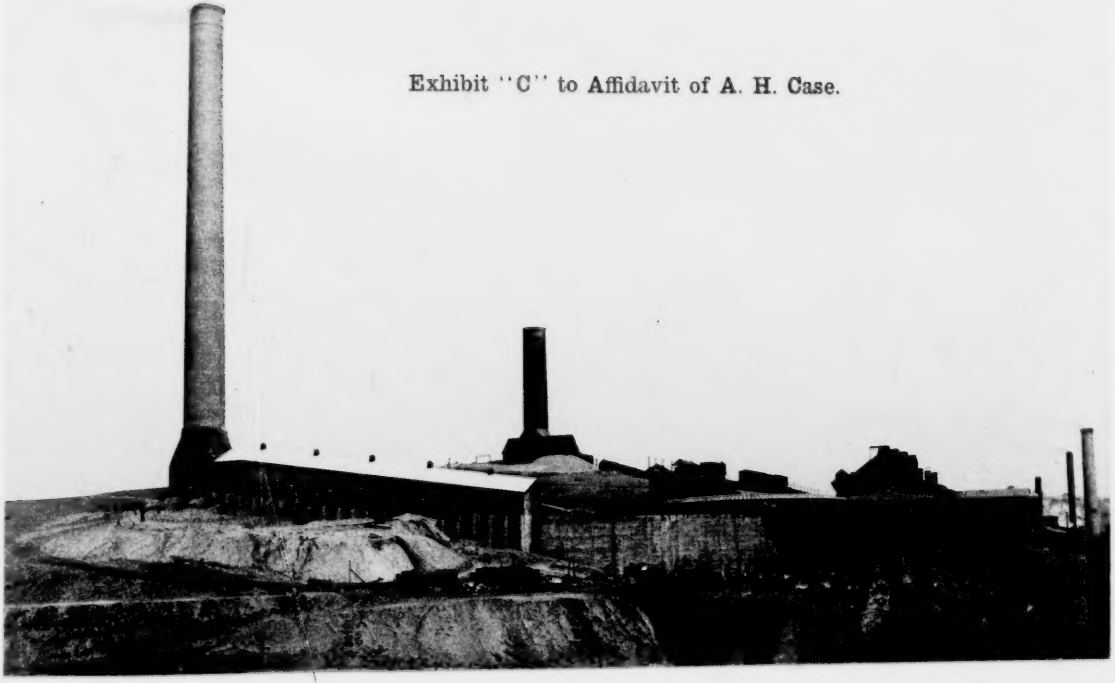
Notary Public, Polk County, Tenn.

(84579.)

Exhibit "A" to Affidavit of A. H. Case.

Exhibit "B" to Affidavit of A. H. Case.

Exhibit "C" to Affidavit of A. H. Case.



FILE COPY.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1906.

No. 5—Original.

THE STATE OF GEORGIA, BY THE ATTORNEY-GENERAL, JOHN C. HART, PLAINTIFF,

vs.

THE TENNESSEE COPPER COMPANY AND THE ISABELLA COPPER COMPANY (LIMITED), DEFENDANTS.

IN EQUITY.

SUPPLEMENTAL EVIDENCE AND EXHIBITS ON APPLICATION FOR RESTRAINING ORDER.

JOHN C. HART,
Attorney-General of Georgia.
LIGON JOHNSON,
Solicitor for Complainant.
ATLANTA, GA.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATEMENT.

Pursuant to permission heretofore granted, the State of Georgia files its supplemental evidence, relating principally to the damage done by defendants' fumes after the high stack of the Tennessee Copper Company was put into operation, and since April, 1906, the date of the hearing herein.

In order that the true situation might be ascertained and the condition of Georgia's territory adjoining the copper plants be investigated by competent and wholly impartial experts, Georgia, through its counsel, requested the departments of Forestry and Chemistry of the United States to again send the government experts to the Ducktown region for an investigation of conditions arising since the operation of the high stack by the Tennessee Copper Company, and further requested that the result of such investigations be embodied in affidavits for use in this cause.

These requests were granted and Forester A. B. Patterson and Chemist J. K. Haywood, who had made special studies of the effect of sulphur fumes upon vegetation, were sent to

study the situation. In addition, Georgia directed her entomologist, Ralph I. Smith, to make an investigation throughout said territory with special relation to insect injuries. The result of these investigations appear in the respective affidavits of Messrs. Patterson, Haywood and Smith.

The vast increase of injury by sulphur dioxid during the past summer is declared by each expert, the increase of the zone of injury being shown in detail by Forester Patterson. A map by the Department of Forestry setting forth the limits of each zone of injury in October, 1905, is filed for comparison with the zones of injury as declared by Forester Patterson for September, 1906, which comparison shows the zone of serious injury to have increased the enormous amount of five hundred and ninety-two per cent. during the present summer over the total territory theretofore seriously affected.

In addition to the expert testimony counsel submits considerably in excess of a thousand affidavits from residents of North Georgia reciting the heavy injury during the past spring and summer, declaring that the fumes have been stronger, have traveled further and laid waste localities previously immune thereform. A number of the affidavits filed recite instances of the utter destruction of whole gardens, fields of crops and hillsides of timber by the fumes in but a few hours.

The effects of the fumes are further established by the affidavit of Wm. A. Wright, Comptroller of the State of Georgia, declaring the abandonment of 86,415 acres of land during the past year by the citizens of the counties within the radius of the harmful effects of the destructive gases.

These conditions are shown to arise from the joint fumes of the defendants, the sulphur dioxid having a strong attraction for kindred fumes, and, although about five miles apart, the fumes of the two plants usually blend together within a few miles of the furnaces, regardless of the direction of the winds; and those of the high chimneys and furnace vents commingle in the immediate neighborhood of the plants. These fumes under the furnace and high stack mode of operation are now often as strong, dense and great in volume from twenty to thirty miles away from the plants as they formerly were from three to seven miles from the roast heaps.

That the court might see as nearly as possible the effects of the sulphur dioxid, photographic views were taken within the injured area. It was found impossible to show the leaf effects where the leaves had been killed and merely turned brown, as the living and dead leaves of this kind had the same appear-

ance in the picture. Notwithstanding the fact that much of the recent injury was evidenced only in this manner, counsel believed that sufficient injury, such as dead and leafless timber and that with its leaves curled and shriveled up could be shown to warrant offering the pictures. The views further illustrate the density and carrying power of the fumes.

In accordance with the suggestions of the court, counsel have sought to show the commercial feasibility of the conversion of the noxious gases into sulphuric acid, and that such was fully realized by the defendants prior to the time that Georgia's suit was filed. Counsel have filed the declarations of President Channing of the Tennessee Copper Company both as to the feasibility of sulphuric acid manufacture and the causes leading to the erection of the high stack, and further refer to the decision of the United States *vs.* Mountain Copper Company heretofore filed, judicially declaring the possibility of the conversion of the fumes, to bulletin 89 of the Department of Chemistry of the United States to the same effect, and to the several reports of the Departments of Agriculture, Geology and Census, hereinafter quoted in this connection.

The maximum possible production of sulphuric acid, under the facts as stated by President Channing in his supplemental affidavit, is shown by Chemist John M. McCandless to be 851,206 tons of 50° (weak) acid per annum. The Ducktown Company makes no statement upon which to base figures other than that made for 1904 to the Department of Geology (Mineral Resources, page 218), in which the relative production of copper is given as follows: Tennessee Copper Company, 10,690,389 pounds; Ducktown Company, 3,000,000. Since said date the Tenessee Company has more than doubled its furnace capacity, while that of the Ducktown Company has remained unchanged, giving a ratio of production of at least seven times as much by the Tennessee Company as by the Ducktown Company. At this proportion the gross maximum production of sulphuric acid by both plants would amount to something under 1,000,000 tons of weak acid per annum.

The acid contents of fertilizer is shown by the affidavits of Messrs. Sams, Osborne and Rogers, managers respectively of the Virginia-Carolina, Armour and Swift Fertilizer Companies, about the largest fertilizer manufacturers in America. The sulphuric acid contents of the average short ton of fertilizer by computation based upon the figures of these three concerns is found to be a little in excess of 800 pounds or two-fifths of the entire fertilizer. Tennessee and the adjoining

States of Georgia, North and South Carolina, Alabama and Florida are by the tables filed shown in 1904 to have used 2,047,950 tons of fertilizer or about enough to take up the entire possible sulphuric acid output by defendants, Georgia alone consuming about one-third the gross possible product.

Tables by the Census Department are also filed to show that more than four-fifths of the total fertilizer manufactured in the United States is made from New York southward and east of the Mississippi river.

A table of the production of phosphate rock in the States of Tennessee, Florida and South Carolina, prepared by the Geological Survey, is also filed. This rock is useful—has commercial value only when it may be mixed with equal or greater amounts of sulphuric acid. The production in long tons is given at 1,947,194 per annum, or 2,180,000 short or commercial tons, or an amount requiring more than double the gross possible production of acid by defendants.

Tables prepared by the Department of Census for 1902 showing the sulphuric acid used in the manufacture of other acids and high explosives are also filed. For many other uses specified, even where large quantities of acid are required, as in oil and sugar refining, dye and paint making and the like, no authentic record of the consumption of acid is at hand, and no evidence can be offered in this connection.

In addition to the consumption of acid, the market price of acid is also shown, which, at the present time, in tank cars and at carload lots f. o. b. cars Atlanta is $10.40 per ton.

The cost of the production of copper by defendants, as established by the government publication, "Mineral Resources of the United States for 1904," being less than nine cents per pound, and the present market quotations of copper, in excess of nineteen cents per pound, are offered to illustrate the true cause of the vigorous efforts of defendants to prevent the erection of sulphuric acid plants or other alterations that would, even for the time being, hamper or curtail the production of copper at the flood-tide of a record high market.

Counsel for plaintiff have offered no testimony in direct rebuttal of the original testimony of the defendants other than that of Sherman Martin and others to the showing by the defendant, The Tennessee Copper Company, as to an alleged meeting of protest to Georgia against its suit. These affidavits specify and identify about nineteen-twentieths of the alleged participants as employees of the copper company who were paid full time to attend the meeting, and the affidavit of

the tax-collector of Fannin county declaring that but an exceedingly small per cent. of the persons listed as attending such meeting were taxpayers in said county.

Affidavits from William Barclay and W. C. Allen are also presented in relation to pictures taken for possible use in this cause during June, 1906, by parties driving from Ducktown, Tennesssee, through northern Georgia and in territory which at that time showed but little fume injury. In September, 1906, the same regions were traversed by these witnesses, who found great and constant injury.

Counsel, in conclusion of this statement, desire to call attention to the fact that defendants' counsel were in error in their concluding remarks at the hearing of this cause as to the extent of the temporary relief sought and insisted upon. An injunction *pendente lite* was asked against the liberation of any sulphur dioxid whatever or other noxious fume by each and both of defendants.

Counsel for plaintiff, at an early stage of the litigation, did state to counsel for the defendant, the Ducktown Company, that if said company would immediately begin the erection of a sulphuric acid plant sufficient to take care of the sulphur fumes and would file a stipulation to that effect in this cause, and also for the immediate completion of said plant, the application for temporary injunction would be held in abeyance. This stipulation was never filed and the cause was called up for hearing by plaintiff upon the full prayers of the bill. The prayers for temporary injunction against both defendants have at no time been withdrawn, waived or modified, and by reason of the conditions and increase in territory subject thereto and damage by the fumes during the present summer, counsel desire to invoke the full relief asked under the original bill herein.

Respectfully submitted.

JOHN C. HART,
Attorney-General of Georgia.

LIGON JOHNSON,
Solicitor for Plaintiff.

Atlanta, Ga., September 24, 1906.

To His Excellency, J. M. Terrell, Governor of Georgia:

We, the commission appointed by the General Assembly of the State of Georgia, and approved by your excellency, to investigate the destruction of vegetation in North Georgia by fumes from the smelters of The Tennessee Copper Company and The Ducktown Sulphur, Copper & Iron Company, at and near Isabella, Polk county, Tennessee, beg to report:

In further pursuance of our duties above set forth, we revisited the counties of Gilmer and Fannin during the third week of September, 1906, and reinspected considerable of the country visited by us on our former inspection, the latter part of August, 1905. We find the area of serious injury to timber and other vegetation vastly increased in every way in the territory of this State since our last visit. The high stack of The Tennessee Copper Company has in nowise relieved the situation. On the contrary, we find the evil spreading at an alarming rate in all directions. Particularly is this true of the territory along the Cherry Log, on Rock Creek, Gilmer county, Georgia; Boardtown Creek, and the ridges surrounding the same, the territory immediately surrounding and north of Whitepath, the ridges to the southwest, west and north of Ellijay, all in Gilmer county, being territory situated from fifteen to thirty miles south and southwest of the copper plants. At all of these places last year, the injury was scarcely perceptible; but on this trip the injury was heavily marked on all sides, the trees are brown and seared, and the leaves are falling fast, so that the woods are now covered thick in many places with withered leaves that budded fresh this spring.

The ridges to the north and west of Blue Ridge showed serious injury to almost all the timber. The town of Blue Ridge, Fannin county, is situated on the backbone of the Blue Ridge mountains, and from a hill situated a little to the northwest in the corporate limits of this town, a perfect view of the fumes in column from both of the copper plants situated in Polk county, Tennessee, some twelve miles distant, could be

seen, and all intervening country for miles around was plainly in sight. We could trace the immense volumes of fumes, as discharged from the smelters and furnaces of each of the plants drifting out over the country, uniting and settling into the timber on the surrounding mountains. The ridges in view all about us as far as the eye could survey, looked brown and seared, as if the whole forest in every direction had been visited by severe frosts, and at least three-fourths of the timber within the area appeared to be seriously affected. The conifers particularly, were badly affected. The decidious trees in many cases had almost entirely shed their leaves, and the ground was covered thick with the same that had been green and vigorous this spring.

We visited and carefully inspected the same territory last year, and the timber in this immediate neighborhood showed only slight injury, then.

In journeying from Ellijay towards the direction of the smelters, the injury rapidly increased. On this trip we found greater injury at Ellijay, some twenty-seven miles from the smelters, than we observed last year some seven miles from the same, so that this season has, in our knowledge, clearly carried the serious injury to vegetation at least twenty miles further into terriory of this State.

Our investigations this year have more than verified our apprehensions of last year, as the injury and damage has increased much more rapidly than we had predicted, and it is our opinion that if this damage be not immediately abated, the whole of this section of our State will be irreparably ruined and lost to its present owners and our commonwealth.

Respectfully submitted.

T. G. HUDSON,
Commissioner of Agriculture.
JNO. M. MCCANDLESS,
State Chemist.
W. S. YEATES,
State Geologist.
WILL H. SHIPPEN.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

UNITED STATES OF AMERICA—District of Columbia.

Personally appeared A. B. Patterson who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a forester by profession, and is Assistant Forest Inspector in the Forest Service of the United States Department of Agriculture.

Deponent, in his official capacity as Assistant Forest Inspector, and under the orders of the Forest Service, during the first and second weeks of September, 1906, visited the region adjoining the Ducktown basin of Georgia and Tennessee for the purpose of investigating forest conditions, and especially with relation to the forest injuries through sulphur fumes, previously reported by Forest Assistant Holmes of said Forestry Service, and particularly with relation to the conditions resulting from and the effects of the tall stack erected by The Tennessee Copper Company and the increased furnace smelting of said companies, the stack having been erected and put into operation after the investigation by said Holmes was made.

At the time deponent was instructed to make his said investigation, said Forest Assistant Holmes was on duty with said United States Forest Service in the Territory of Arizona,

and was not available for said investigation, and this deponent was detailed therefor.

Deponent has carefully examined the affidavit heretofore made herein by said Holmes, his report upon forest conditions around Ducktown, and the map prepared by him showing the zones and the extent thereof of the several character of injuries by the sulphur fumes of the copper companies, which map was filed with said Forestry Service and blue-prints thereof are filed herewith and marked exhibit "A" for identification. Deponent has also examined the photographs of said region filed by said Holmes with said Forest Service, the same by said Service being numbered 63032, 63036, 63038, 63039, 63040 and 63041, reprints thereof under said numbering being filed herewith.

By said map and report of said Holmes under his said investigation in August and September, 1905, the zones of injury by said sulphur fumes were shown upon said map and classified as follows:

"1. An inner zone, with a radius of from three to five miles, is practically denuded of forest growth, although a few dead trees stand here and there.

"2. The middle zone forms an irregular band around the inner and varies from three to eight miles in width. The included forest has a brown appearance accompanied by a premature falling of the leaves. Most of the susceptible species are affected.

"3. The outer zone includes the remainder of the affected area, its inner limit being seven miles, and its outer limit being twenty miles from the furnaces. All of included forest is not injured, but it is likely to be, since leaf injury was noted at the outermost limits."

By reason of the somewhat limited time allowed to deponent for his investigation, deponent did not wholly retrace the investigation of said Holmes throughout the entire territory, particularly in the immediate neighborhood of the mines where such injury was apparent, even to the casual observer, but, by reason of the immediate recognition of greatly increased area of injury, deponent devoted his investigations largely to the territory of new or increased injury, and to the south, southeast and east, and to the north and northwest of said plants of The Tennessee and Ducktown Copper Companies.

Deponent's investigation disclosed that the increase of the

inner zone of injury or area destitute of forest was comparatively small. Complete denudation has spread about one mile north of the limits observed by Mr. Holmes and specified upon said map and the southern boundary has advanced about one-half a mile. From casual investigation of the immediate neighborhood of the plants it would appear that conditions had slightly improved, some grass and occasional shrubs or undergrowth having sprung up during the present spring and summer. What benefit there may have been was so slight and affected so small an area that deponent did not think it worth while to make a comprehensive examination. As previously stated, the outer zone of complete denudation had increased, and any benefit from the stack whatever was confined to the immediate vicinity of the copper plants.

The increase of the area of serious injury over that reported by Mr. Holmes in September, 1905, has been very great and exceeds at every point examined, not only the area of serious injury, but passes beyond the limits of leaf injury (the third zone) observed by said Holmes and specified upon said map hereinbefore referred to.

To the south the serious leaf injury has extended as far as Talona Mountain, twenty-six and three-quarter miles from McCays, or eighteen and three-quarter miles south of the limits observed and fixed by Forester Holmes. To the southeast white pine, black and blackjack oaks are killed, and other black oaks are seriously defoliated on John Dick Mountain, twenty-three and one-half miles from McCays, or seventeen miles beyond the limits found by Mr. Holmes in this direction. East of McCays serious injury was noted at Culberson, twelve and one-half miles distant, or five and three-quarter miles beyond similar injury apparent last September. North of McCays serious injury was observed on Cane Creek, fifteen miles from the high smoke-stack, or four miles farther north than observed by said Holmes. Serious injury amounting to complete defoliation of from thirty to sixty per cent. of the white pine was observed along Gee Creek, in Polk and McMinn counties, Tennessee, twenty and one-half miles northwest of McCays, while the farthest injury noted by said Forester Holmes in 1905, in that direction, was ten and one-half miles.

Topography and prevailing winds are important factors in the fume injuries. The mountain sides or coves facing or opening in upon the Ducktown basin, and not protected by

mountainous or other barriers, are the localities showing the heaviest injuries. Often in the same immediate neighborhood there will be a conspicuous injury in the unprotected sections while at some point shielded by protecting barriers but small injury is shown.

To the east and west of the Ducktown basin in Tennessee the mountain ranges are much closer than towards the north and south. The greatest length of the basin is in Georgia, to the south, and to the northward in Tennessee, which may explain the tendency of the fumes to more frequently seek these directions. To the south of the smelters the fumes can pass through numerous low gaps and fill the valley of the Ellijay river as far south as Ellijay. East of Ellijay the Cartecay valley is protected from the fumes by a high range of mountains, and it was not until a point opposite Big Creek Gap was reached, between Tickanetley and Diamond was reached the sulphur dioxid injuries became apparent.

In the Toccoa river valley above Wilscot creek the fumes traveled high and serious injury is confined to the upper parts of the exposed mountains in that watershed. The river is exceedingly winding and the lower strata of the fumes were evidently pocketed in the turns of the river while the upper strata passed through the wind gaps and encountered the high slopes.

West of Stanley Gap leaf damage rapidly increases as Rock creek is descended. Probably fifty per cent. of the white pine, black, scarlet, Spanish and blackjack oaks are so seriously injured in this watershed that their recovery is doubtful, even if subjected to no more sulphur fumes. It is well known that when trees are injured or their vitality lowered in any way they are unable to resist the attacks of insects, so that insects are often the secondary cause of the trees being killed in the fume affected area.

A large number of thrifty young white pines, recently defoliated, were examined, and in no case were any insects found, although the inner bark and sap wood were green. On the other hand trees noted and marked by said Forrester Holmes in September, 1905, as injured by sulphur fumes, were found infested with insects.

Throughout the valley of the Ellijay river as far as the Coosawattee river, serious damage is general, particularly on the north slopes of the mountains and foothills, although trees in deep coves running east and west often escape injury. Six

miles west of Ellijay, Georgia, short-leaf and scrub pines, which are fairly resistent species of forest trees, are often almost completely defoliated. Throughout the seriously injured area the included forest appears to have about one-half its normal density, due to the premature falling of the leaves.

Along the Murphy branch of the L. & N. Railroad the contiguous area of injury extends about eight miles, and beyond this limit appears at intervals as far as Culverson. This region is fairly protected from the fumes by a high mountain range.

Leaf injury of a serious nature was seen on the slopes north of the Hiawassee river, affecting in particular the white pine and the black oaks. With only a low narrow divide between the Hiawassee and Tellico rivers conditions are favorable for the fumes to be carried into Monroe county, Tennessee, when wind currents are in that direction.

The actual limits of the leaf injury was not determined. This injury is embraced under the third zone specified upon the map of Forester Holmes. Throughout the entire territory covered, with the exception of the road east from Ellijay to Stock Hill and the region along the Murphy branch of the L. & N. Railroad, previously referred to, both being protected by high mountain ranges, and occasional areas screened by mountainous barriers from the fumes, the injury was apparent. To locate the full extent of this would require a lengthy investigation, so long in fact, that such would be inaccurate when concluded, should the zone of injury increase as rapidly as it has during the present summer. From the investigation made, however, it is unquestionably true that through the high stack of The Tennessee Copper Company and the increased smelting of the two companies, the third zone of leaf injury has been very greatly increased.

On comparing the increase in the seriously affected area the average of five conspicuous radii established a zone of serious injury with a radius of 21.6 miles from McCays, while on these same radii the limits noted by Forester Holmes in September, 1905, averaged 8.4 miles. The increase in territory based upon a circle passing through the average point afforded by said radii above mentioned would be as follows: Territory involved in the serious injury zone as disclosed by the investigation of Forester Holmes in September, 1905, 213.8 square miles; territory embraced in the zone of serious injury as disclosed by investigation of deponent in September, 1906,

1,481.4 square miles, or an increase of 1,267.5 square miles during the past year, approximating an increase of 592 per cent. since the investigation by Mr. Holmes one year ago. As previously stated, these figures are based upon averages afforded by five conspicuous radii. The injury is oblong in form, rather than in a circle, less than the average of the radii to the east and west and greater to the south and north.

While it is true that in the total territory embraced within the territory described by the radii above mentioned, there are a number of areas in which the forest trees have not been injured, such areas are either topographically protected from the fumes, or the wind currents have been such that the sulphur fumes have not visited same, and that other unprotected areas considerably beyond the limits afforded by the radii have suffered severe injury.

From the result of the investigations made it is clear that the continued liberation of the fumes will result in greatly increased damage and that each of said zones of injury may reasonably be expected to grow in proportion to the diffusion of sulphur dioxid throughout the adjoining territory.

A. B. PATTERSON.

Sworn to and subscribed before me, this 24th day of September, 1906.

HENRY C. TOWERS,
Notary Public, District of Columbia, U. S. A.

The following erasures and additions, respectively, were made before the signing thereof: First page, lines 4, 6, 17, 23; second page, lines 5, 31, 32; third page, lines 13, 28; fourth page, line 34; fifth page, lines 4, 5, 6, 7, 8, 9, 23, 28.

A. B. PATTERSON.

Sworn to and subscribed before me, this 24th day of September, 1906.

HENRY C. TOWERS,
Notary Public, District of Columbia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

UNITED STATES OF AMERICA—District of Columbia.

Personally appeared J. K. Haywood who, being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a chemist by profession, and is now chief of the Miscellaneous Laboratory, Bureau of Chemistry of the United States Department of Agriculture.

Deponent, in his official capacity, and under the direction of the Bureau of Chemistry, made, in the summer of 1905, for said Bureau, at the request of the Bureau of Forestry, an investigation of the territory in and around Ducktown, Tennessee, for the purpose of determining for said departments whether or not the fumes of the copper plants in that vicinity were injurious to timber and vegetation, and if so, the extent of same. The result of this investigation deponent has heretofore incorporated in an affidavit in the above-styled cause.

Deponent, in his said official capacity, and at the instance of said Bureau, was again, to wit, in September, 1906, ordered to investigate said territory, with special reference to that within the State of Georgia and contiguous to the Ducktown region, to determine whether or not the injury to timber and vegeta-

tion caused by the Ducktown smelter fumes was greater or less in extent than it was when deponent made his examination about one year ago, when deponent was making a study of said question as heretofore stated.

Not only upon deponent's previous inspection of the territory adjoining the Ducktown region, and the various tests and examinations made thereunder, but also by deponent's examination of the effects of sulphur fumes liberated by copper companies in Northern California and through numerous experiments personally conducted by deponent, has this deponent familiarized himself with the effects of sulphur dioxid upon vegetation and timber generally, the quantity and volume necessary to produce injury or death, and the appearance of timber, foliage and vegetation subjected to the hurtful influence of said fumes.

Deponent's second examination of said territory in September, 1906, was confined to the counties of Fannin and Gilmer, in the State of Georgia, and was partly over territory previously examined in 1905, which at said time disclosed either, but unconspicuous or no damage from sulphur fumes.

Beginning at Ellijay, Georgia, about twenty-three miles airline south of the plants of the copper companies, deponent made an examination to the westward about two miles, and upon another trip to the southwest from three to four miles. From about one mile to the westward of Ellijay, as far as this deponent examined in a westerly and a northwesterly direction, there was grave damage to timber. The damage was especially to be noted in the case of blackjacks, and to somewhat less extent of black, red and Spanish oaks. The greater part of the damage had all the indications and appearance of injury by sulphur fumes, the other injury to timber being only that usually incident to forests and timber growth under practically normal healthy conditions; that is to say, occasional and insignificant injury by lightning, insects and the like, and deponent is of the opinion that practically all the damage over and above the usual conditions in said locality is attributable to the smelter fumes given off by the copper companies in the operation of their plants. The region herein referred to, and subject to said harmful influence of said smelter fumes lies from about twenty-one to twenty-five miles south by west of Ducktown in an airline.

Another trip was made from said first-named locality in

Gilmer county to Santa Luca, thence across Boardtown creek to the southern part of Fannin county; thence to the Louisville & Nashville Railroad, where it intersects the Gilmer and Fannin county lines; thence to the hamlets of Cherry Log and Whitepath, and from said points back to Ellijay, Georgia. These examinations carried deponent as far north as the southern line of conspicuous injury as disclosed by deponent's said investigation of 1905. Practically all the territory included in the localities heretofore specified lay to the southward and beyond the zone of conspicuous injury as shown by deponent's said first examination.

The examination of 1906 disclosed that the zone on conspicuous injury had greatly increased. From about a mile north of Ellijay to Santa Luca considerable damage to the forest was to be noted, especially to the blackjacks, black, red and Spanish oaks. From about one mile north of Santa Luca on across Boardtown creek, and on into the southern part of Fannin county, to the point where the county-line crosses the railroad, very severe damage to the forest was to be noted. Here not only were the blackjack oak, black, red and Spanish oaks injured and discolored, but short-leaf and scrub pines, which are fairly resistent to fumes, were also injured and discolored. Throughout this whole region just named, the white pines were very badly damaged.

From the point mentioned in the previous paragraph on down to Whitepath, the damage was just about as severe, and the same classes of trees were damaged as described in the preceding paragraph. From Whitepath on to Turniptown creek there is still damage to the foliage, but not so great as was observed north of Whitepath. South of Turniptown creek the damage is not so great or so continuous as in the other localities heretofore noted, but occasional damage is observed in this direction on down to Ellijay. The damage is, of course, not equally distributed in all directions at equal distances from the furnaces. The topography of the country has considerable bearing upon the injury, as a locality sheltered by mountain barriers may be practically immune, when another neighborhood at a greater distance not so sheltered, or adjoining to a stream or valley lands opening into the Ducktown basin may suffer severely.

Deponent is of the opinion that the severe damage that is to be noted this summer (1906) down to Whitepath on one hand

and a mile north of Santa Luca on the other hand, is just as severe as the damgae noted one year ago, about one mile north of Blue Ridge, Georgia, which points are from about eight to eleven miles farther south.

Deponent is also of the opinion that the damage noted this summer (1906) west and southwest of Ellijay is almost as great as the damage noted one year ago in the region almost southwest of Blue Ridge in the southern portion of Fannin county, Georgia, from fifteen to eighteen miles further north.

From deponent's investigations and examinations, deponent is of the opinion that the far greater portion of the damage hereinbefore noted is attributable solely to the sulphur fumes of the copper companies near Ducktown; that is to say, that practically all the damage is attributable to said fumes, other than the usual and normal injury to be found in average healthy forests similarly situated from occasional and comparatively insignificant insect injury, lightning and the like.

Deponent is further of the opinion that the area of the smelter fumes has greatly increased during the present summer over what it was one year ago.

J. K. HAYWOOD.

Sworn to and subscribed before me, this 17th day of September, 1906.

LEON M. ESTABROOK,
Notary Public, District of Columbia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-stated case, deposes and says as follows:

Deponent is a resident of Knoxville, Tennessee, and is at present professor of horticulture and forestry in the University of Tennessee. From 1896 to 1899 deponent was assistant chief of the Division of Forestry, United States Department of Agriculture. He believes his studies and opportunities have given him superior advantages in forming an opinion on the subjects discussed in affidavits presented herewith as exhibits "A" and "B." The examinations referred to therein were made at the request of Mr. Charles Seymour, of Knoxville, Tennessee. Deponent has no personal interest in the premises.

CHARLES A. KEFFER.

Sworn to and subscribed before me, this 18th day of September, 1906.

W. T. PICKETT,
Notary Public, Gilmer county, Georgia.

"A."

Saturday, June 16, 1906.

I noted from point on Bell Knob almost due east of stack of Isabella works, that the woods on west face of this knob were almost all dead, except that within 200 feet of the top, on north face, towards east, is a cove where timber seems uninjured at a distance, but on going through it many dead trees are found, and the characteristic brown discoloration of the leaves.

In ravine one mile from stack of Tennessee Copper Company, and two miles from Isabella works, found sourwood leaves much affected; a little farther on, dogwoods half dead. These were the only trees alive.

From Bell Knob we rode down south face of ridge eastward, to the south of Anglico Gap, and up through Franklin Gap, climbing the mountain to the left of Franklin Gap (going from Ducktown) nearly to its top, some five miles from both works. On this face of the mountain, as compared with the Ducktown basin, little damage has been done, though there are dead trees everywhere, and very few trees are in vigorous health. As a whole, the forest would be called sickly.

Returning through Anglico Gap on main road to Stewarttown we stopped at cabin in border of woods (no live woods beyond this towards Ducktown), whose owner told us that at his place more damage resulted from smoke of smelter (Ducktown, not Isabella) than had been caused by the roasting process. He had a garden—beet foliage badly killed by fumes, but corn, onions, cabbage and beans unharmed—showed us one place in cornfield that he had replanted where first stand was destroyed by fumes. Everywhere I noticed that trees of the same species were not equally injured; would find a blackjack oak with leaves badly spotted, while a nearby tree of same kind would be uninjured in its leaves.

After we reached McCay a very heavy rainfall. Sunday morning the river had risen three feet.

During the afternoon the wind changed from south, whence it blew steadily in the morning, to east and north, then back from south again.

In the afternoon at 4 p.m., the Big Frog Mountain could not be seen for fumes, and the Little Frog very dimly.

Sunday, June 17, 1906.

Crossed the river and into Georgia at McCays, and rode towards Epworth College, some four miles.

On heights just above river all trees facing Ducktown, almost without exception, were dead or in very bad condition. In coves away from Ducktown the tops of tall trees were dead or dying, while many small trees showed little injury at present, though in sapling white oak many topmost branches were dead. The black oaks, as a class, much more damaged than white oaks.

Went out the Ellijay road three miles or more, then crossed through the woods to Epworth College. In the lowlands the damage to the forest growth is everywhere less than on the ridges. Just beyond the college is a ridge running a little east of south, direction south by southeast from Ducktown. Both sides of this ridge face almost equally to Ducktown, the crest being almost in line with it. The soil is clay sand, poor, and black jacks the dominant species, with white and post oak, black oak and a few others. The trees are in very bad shape, some young (2-5 in.) saplings of white oak little injured, but black jack worst of all. Most of the latter showed marked leaf injury and much dead wood. Some sapling white oaks not injured at all, but most have a little leaf spot.

On the first ridge beyond Epworth (a little east of south of stack), there are black, red, black jack oaks from 12-20 inches diameter, not a single healthy tree—all with large dead branches in crown, and thin foliage. One large white oak 18 inches in diameter had thin foliage and many small dead branches. Men in neighborhood say place is four miles to four and a half to McCays—barometer reads 1,850 feet, level shows a little higher than stack. About two miles of forest in straight line between this point and stack, very few clearings except around Epworth, and these all small. Trees here the largest yet found, either south or northeast of copper works. Fumes blowing east almost leved with top of stack (no breeze here) and making the mountain we were on yesterday very hazy as seen from here.

At Turtletown Station the injury is equal to that at Epworth, as observed in passing on railroad train.

At Farner much less injury observed than at Turtletown—but still very apparent, especially in mature trees.

Ellijay, Ga., June 30, 1906.

Rode out with Mr. Shippen on Big Turniptown creek; ascended Walnut Mountain, some twenty-five miles from Ducktown, then continued up the creek. When about a mile beyond Walnut Mountain opposite a gap in the range between us and Ducktown, I smelled SO^2 gas distinctly for a moment and called Mr. Shippen's attention to it. He smelled it also. All along the way there were many dead and dying trees on the north slopes—and especially on low ridges running north and south—on which both faces showed injury. In several cases the leaves, especially of hickory and black jack oaks, showed the same injury I had observed near Ducktown.

The coves of the north slopes of Turniptown Mountain contain a fine growth, many large trees of poplar and the oaks. A portable sawmill was sawing poplar and oak loks 16 feet long, 3 feet diameter and perfectly sound.

Of the standing trees, especially on the higher slopes of that mountain, many were dead, and the very great majority had many dead limbs in their top—the injury quite as bad as recorded of ridge a mile or two south of Epworth.

Sunday, July 1, 1906.

Rode from Ellijay to Whitepath, and rode along the south side of the gap through which we smelled the fumes yesterday. The road lay through the valley of Turniptown creek, and past the Whitepath hotel. The low ridge to the right saw a great many trees dead in the timber—on north slope and crest of ridge (towards Ducktown). Hickory and chestnut oak dead almost without exception, and the white pines were many dead and dying. Near the road many trees showed injury to the foliage, but on the slope of the ridge we saw the most injury. Almost every old tree, both along the road and as far as we could see, had many dead branches in the crown.

Immediately opposite the station at Whitepath is a growth in which white pine is the dominant tree—from 50 to 100 feet high. All the pines within sight of the station are either sick or dead—not a single healthy white pine tree.

Ellijay, July 7, 1906.

On Little Turniptown creek, just beyond (up stream) from the Holt farm, on a due northern slope, is a growth of white

pine intermixed with hardwoods (principally oak). A pine 26 inches in diameter, breast-high, that will make four 16-foot logs in trunk (diameter of trunk at 54 feet from ground estimated 18 inches) is dying—should say, from its appearance, can not put forth leaves next spring. Several white pines on the ridge already dead, a dozen or more within sight of one above noted dying; none in vigorous health.

In ascending along Little Turniptown creek, in the fourth of a mile along the road immediately above the Holt farm, I counted from the saddle seventy-six white pines on the north slope and in the creek bottom, over fifty of which were fifty or more feet high, and of these only three were in health, two of which were in the creek bottom; several were dead, and the great majority were very sick, indicated by scanty and brownish foliage.

As we proceeded up the creek the number of dead hardwoods greatly increased—over half the mature trees were dead or dying.

On the ridge to the south of L. A. Rogers' farm is a gap between higher ranges to the east and west, and farther south, perhaps a mile distant, is Walnut Mountain, on which is the orchard visited. This Rodgers' gap has more timber killed by smoke than any place visited in vicinity of Ellijay. The mature trees alive, with few exceptions, are black or yellow oak (quercus tinctoria), black gum and a few half-dead chestnuts —found one live hickory 10 inches in diameter on crest of ridge. There is hardly a mature tree but has many dead branches in its crown, and not one that is vigorous. Many young sprouts of hickory, especially, show badly discolored foliage.

The soil is very poor and would not support a luxuriant forest growth, such as is seen in the coves, but here the timber is practically all dead and dying. No evidence of recent fires. Sprouts three to five feet high show no fire injury. Fully three times as much dead timber was on the north slope of this ridge (towards Ducktown) as on the south slope.

From the headwaters of Little Turniptown creek I went to the top of Chestnut Mountain (barometer reading 2,000 feet higher than Ellijay). There is a clearing along the summit and noth side of this mountain—whence an uninterrupted view to and beyond Isabella. The stack of the Isabella smelter plainly visible, and to the left the fumes from the Ducktown

smelter—wind from the south, and the fumes from the two stacks merged and were blown together, as seen from Chestnut Mountain. From this height I observed that there were no high mountains between this and the Ducktown basin, but on either hand, and beyond Ducktown high mountains seemed to hem in an irregular valley, which is traversed in all directions by ridges that are low as compared with the surrounding mountains. It is the timber on these lower ridges that has been injured. A careful inspection of the timber on the higher part of Chestnut Mountain revealed no injury; near its base sickly and dead trees were found, and as above noted, the forest growth on the lower ridges, especially on north slopes, crests and where ridges run north and south, both sides showed marked injury as compared with south slopes.

It is apparent that much of the dead timber has died during the past few years. Everywhere, as in any uncared for forest, one may see an occasional dead tree with indication of having been dead several years. But not only are there many dying trees, and many others with very thin crowns and dead branches, but of the dead trees the condition of the bark shows that they have died within the past two years.

The injury is not the same in all species. Among the most susceptible to injury by the fumes are the white pine, hickory (all species), chestnut oak. Swamp maple (acer rubrum) is very resistant to the fumes. Trees of this species can be found between Ducktown Station and the Ducktown smelter, though I recall no other woody plants there.

It is also to be noted that all the trees of a species are not injured to an equal degree in the same neighborhood. One may find a young white oak evidently in bad condition with another of the same species near at hand unharmed. Among kinds named as especially liable to injury, however, very few healthy trees can be found in exposed localities.

Fannin County, July 8, 1906.

This morning rode out the river road nearly due south, and for the first four miles after leaving East Ellijay bridge saw much dead and dying timber on both sides of the road. The majority of trees sickly or dead. Much brown foliage observed, especially in chestnut oak, chestnut, hickory and black jack—hardly a single chestnut or any size but has many dead branches in its top.

At S. H. Harper's place, six miles south on Cartegay river, thirty miles or more from Ducktown, at ford, white pines along streams all injured or dead—no very large ones, as near Holt farm, but all show some injury—foliage thin and turning brown.

The road turns westward beyond Harper's, and for four miles beyond to Clear Creek church and returning via Cartegay river, less injury was observed, this region being protected to the north by high ranges.

The impression left on my mind as the result of my three visits to the region is that the forests of the low ridges and the lower slopes of the high mountains, reached by the fumes from the smelters at Ducktown and Isabella, are being injured by these fumes. The fumes have damaged and destroyed and continue to damage many valuable timber trees and young timber as far remote from Ducktown as Clear creek, in Gilmer county, Georgia. The injury between this point and Ducktown is not of equal intensity, but varies with location, the slopes and crests of ridges facing or parallel to Ducktown showing greatest injury. While many of the species damaged are of little economic value (as the blackjack oak), others are of the greatest value (hickory and white pine), and the entire destruction of the forest, as a source of timber, seems certain if present conditions are permitted to continue.

I, Charles A. Keffer, set out as above notes made by me on the dates and at the places named, and make oath that they are true and correct.

CHARLES A. KEFFER.

STATE OF TENNESSEE—County of Knox.

Personally came before me Charles A. Keffer, who subscribed the foregoing statement and made oath that same is true, this 23d day of July, 1906.

NORMAN B. MORRELL,
Notary Public.

"B."

Ellijay, Ga., September 18, 1906.

On Sunday afternoon, September 16, 1906, I drove out the Tails creek road from Ellijay, Ga., to Yancy church, between three and four miles southwest, the road crossing and following low ridges and valleys. Returning, I drove out about two and a half miles northwest of Ellijay, on the Dalton road. On both of these roads many trees were seen on which the leaves were brown, and in some cases most of the leaves had fallen from the trees. It was evident that much the greater part of this injury was of recent occurrence. The injury observed along these roads was not continuous; that is, I passed through acres where no recent injury was seen, then there would be very considerable injury apparent. In no place were all the trees injured. Generally speaking, the black oaks (as distinguished from white oaks) showed more injury than any other trees.

On September 17th I rode over much of the territory visited on July 7, 1906, and while there is no indication of additional injury to the forest in some places, in others the injury is very much more marked than it was on that date. Throughout the ride, covering about thirty miles, only two vigorous hickory trees were seen, while a great many hickory trees in size from young saplings to trees over eighteen inches in diameter, showed foliage much browned or fallen. It is not too much to say that the hickory of all species throughout the region of Ellijay is threatened with complete extinction, and is practically destroyed. It is evident, too, from the large number of saplings that this forest was well stocked with hickory.

Viewed from the first ridge toward Ellijay from Stoner Gap (about twenty miles from Isabella) the forest on Stoner Gap had a brownish tinge, and even at that distance, about two miles, I saw many trees quite brown, indicating severe injury.

In tract No. 5, in the sixth district, second section of the Shippen Bro.'s Lumber Company's land, which I visited when here on June 30th, and which at that time showed scarcely any damage, being cove land covered with trees of large size, the forest as seen from the ridge above mentioned showed brown foliage, indicating an injury incurred since my previous visit.

From Chestnut Mountain (about eighteen miles from Isa-

bella) the basin toward Ducktown comprising a wide extent of forest, with comparatively few farms, shows greatly increased injury over what was observed from this point by me on July 7, 1906. The stack of the Isabella works can be seen from Chestnut Mountain, and high mountains rise to right and left, forming a basin traversed by many low ridges. In this basin the general color tone of the forest, as seen from Chestnut Mountain, is of a brownish cast, instead of the deep green which it should show at this season if in health. Roughly speaking, I should say that one-fourth of the trees at the foot of Chestnut Mountain were browned, while fully half of the trees about Cherry Log showed severe injury.

Descending the mountain and passing along the road toward Cherry Log (about sixteen miles from Isabella) closer inspection showed the injury to be fully as great as appeared from the mountain. Everywhere trees of many species had their leaves browned, and in many cases more than half of the leaves had fallen, giving the trees the appearance of late autumn. There were several tracts where white pine was numerous, and almost without exception these trees showed very great injury. I do not believe this species can withstand existing conditions another year. The red and black oaks are so generally injured that a healthy specimen is exceptional. Chestnut is leaf spotted and its leaves are falling. Indeed, the forest shows such marked injury that one is impressed with a grave sense of the danger of its total destruction within a short time unless the cause of injury can be removed.

About one mile north (approximately) of Whitepath, there is a cross bridge, which marks the limit of the very severe injury last described. From this ridge toward Ducktown the forest of the basin, as far as can be seen, shows marked injury. From this ridge toward Ellijay the injury is more local in character and is less marked.

From examinations made in the neighborhood of Ducktown and Isabella and reported in my affidavit of July 23, 1906, I am convinced that the same cause which has destroyed the forest in that region is working injury to the trees herein mentioned, and I believe this injury to be due to fumes from the copper smelters at Ducktown and Isabella. The injury to the forests herein mentioned is unquestionably much more severe and more extensive than when I looked over this region in July. If the same rate of increase of injury is maintained I have no doubt

the forest throughout the region will be practically destroyed in a few years.

I, Charles A. Keffer, set out as above notes made by me on the dates and at the places named, and make oath that to the best of my knowledge and belief that they are true and correct.

CHARLES A. KEFFER.

Sworn to and subscribed before me, this the 18th day of September, 1906.

W. T. PICKETT,
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fulton.

Personally appeared Ralph I. Smith who, being duly sworn herein deposes and says:

Deponent is an entomologist by profession, being a graduate of the Massachusetts Agricultural College at Amhurst, and is entomologist for the State of Georgia.

In connection with the duties of his said department as entomologist for the State of Georgia as aforesaid, during the third week of September deponent traversed a considerable portion

of Gilmer and Fannin counties, Georgia, for the purpose of investigating the death of the timber and vegetation therein and particularly to ascertain whether or not same was attributable to insects.

Northward from the town of Ellijay, Gilmer county, Georgia, through the Santa Luca, Boardtown, Cherry Log and Whitepath districts of Gilmer county, and throughout the territory to the north thereof as far as Blue Ridge, Fannin county, Georgia, and to the westward and southwest of Ellijay for several miles there was recent and conspicuous injury to the timber and vegetation, large quantities of timber being killed and in many localities practically all foliage was destroyed. In the timber recently killed or injured practically no destructive insects were found, nor were such insects present through the forests generally in more than normal numbers to be found in the average healthy forests, with the single exception of trees previously noted as damaged by the sulphur fumes. In the district in which considerable damage by the fumes had previously been noted the destructive insects had increased, the injured and dying timber forming incubators for the harmful insects. The inspects propagate and are present in much larger numbers throughout the injured territory, usually appearing in unusual numbers the spring following the conspicuous damage to the timber. The timber throughout Gilmer county, and most of Fannin county below Blue Ridge traversed by deponent had been so recently injured that the insects were not to be found in the injured or healthy timber.

When the timber has been injured sufficiently to form breeding places for the destructive insects, they in time spread to the healthy timber in the neighborhood. This is particularly noticeable in the area north of Blue Ridge where there was old injury, but very little noticeable south of this point.

Deponent files herewith pictures numbered A1, 2, 3, 4, 5, 6, taken by him in Gilmer county, Georgia, in territory not theretofore noted as containing conspicuous injury to vegetation.

View A is to the northward of Ellijay, Georgia, showing the white pine but recently injured, some having shed their needles, and those appearing white in the picture have needles brown and withered and ready to fall.

View A2 is taken two miles west of Ellijay, and shows injured and dead oak timber.

View 3, about seven miles north of Ellijay, on the Boardtown road, showing timber protected by topographical conditions from the effects of the fumes, and having normal foliage.

View A4, taken within about two hundred yards from view 3, but showing timber not protected from the fumes.

View A5, taken on Boardtown road east of Whitepath, Ga., showing recently killed foliage. While the camera did not bring out the withered and brown effects, a close examination shows the shriveled appearance of the foliage.

View A6, taken about a mile north of Whitepath, showing white pine killed and other timber injured.

R. I. SMITH.

Sworn to and subscribed before me, this ... day of September, 1906.

LOGAN BLECKLEY,
Deputy Clerk, Supreme Court of Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA—County of Fulton.

Personally appeared William A. Wright who, being duly sworn, deposes and says:

Deponent is the Comptroller-General of the State of Georgia,

and has been for the past twenty-seven years, and as such official has charge and custody, among other things, of the records of such State showing the acreage of the improved and wild lands of said State owned or held by individuals or corporations, and listed for taxation, and also the amount of lands, if any, abandoned by the owners and stricken from the records of lands held by individuals or corporations as aforesaid within the State.

In each of the counties of Fannin, Gilmer, Murray, Union and Towns, as shown by said records, there has been a decrease of lands held by individuals or corporations, and an increase of lands abandoned during the past fiscal year, said increase of abandoned lands being greatest in the county of Fannin and least in the county of Towns. The following is a tabulation of the acreage abandoned:

Fannin county	39,330 acres.
Gilmer county	24,604 acres.
Murray county	13,165 acres.
Union county	9,129 acres.
Towns county	187 acres.
Total	86,415 acres.

The heaviest decrease in tax values in said section of the State was in Fannin and Gilmer counties.

Tax returns and land values generally throughout the State of Georgia have largely increased during the past year, such increase in property tax, the same being exclusive of railroads and other public utility corporations and franchises, amounted to $40,775,961 in excess of the returns for 1905, which amounted to $494,820,288.

WM. A. WRIGHT.

Sworn to and subscribed before me, this 26th day of September, 1906.

W. H. HARRISON,
Notary Public, Fulton county, Georgia.

To afford a basis of the probable sulphur dioxid production, as well as the profits in the manufacture of copper by defendant companies, the last detailed report of the Geological Department of the United States, under the title "Mineral Resources of the United States," page 217, for 1904, is given. Report as to the Tennessee properties is as follows:

TENNESSEE AND THE SOUTH.

The Tennessee Copper Company is forging ahead, having in 1903 produced 10,690,389 pounds of fine copper, as compared with 8,103,534 pounds in 1902. A third furnace and a new blowing engine were in course of construction, which according to the estimate of Mr. J. Parke Channing, the president, will carry the output to about 14,000,000 pounds. It has been determined to increase the smelting capacity from 300,000 tons per annum to 600,000 tons by enlarging the smelter from three to six furnaces. The production of ore could be made by operating the mines double shift. The new construction will extend over eighteen months, so that the enlarged output will not come into play until well into 1905. The company is carrying out the plan of smelting unroasted or green ore, which will not only reduce the operating costs, but will increase the extraction, and will make a net saving of not less than one cent per pound on the copper.

Mr. Randolph Adams, the general manager, in his annual report, states that there were raised and shipped from the Polk county mine 75,153 tons, from the Burra Burra 120,046 tons, and from the London 92,266 tons, a total of 287,465 tons, the ore reserves standing at the end of the year at 2,775,000 tons, an increase of 725,000 tons during the year. The charge smelted during the year consisted of 248,067 tons of roasted ore, the equivalent of 275,630 tons of green ore; 8,359 tons of siliceous ore, 213 tons of green ore, 25,336 tons of converter slag, 2,282 tons of blast-furnace by-products, 27,232 tons of quartz flux, and 5,977 tons of matter resmelted—a total of 317,466 tons, which required the consumption of 39,606 tons of coke. The production amounted to 1,922,772 pounds of fine copper in Bessemer pig, 8,736,117 pounds of refined copper, and 31,500 pounds suspended in refining, the yield calculated on the green ore being 37,615 pounds per ton of ore.

The detailed operating costs, free on board Tennessee, are as follows:

Item.	Cost.	
	Per ton of ore	Per pound of copper.
		Cents
Mine development	$0.1343	0.36
Mining, hoisting, etc	.6696	1.78
Crushing and sorting	.0761	.20
Railway	.1454	.38
Roasting	.3300	.88
Credit to ore in process in roast yards	.0442	.12
Blast furnace	1.1437	3.04
Engineering and laboratory	.0324	.09
General	.1443	.38
Converting	.2692	.72
Cost of fine copper in pig	2.9892	7.95
Refining	.0971	.25
Cost of fine copper as ingot	3.0863	8.20

NOTE.—The price of copper for 1905 exceeds 19c.

The treasurer, Mr. J. H. Susmann, reports that sales were made of 3,023,544 pounds of pig copper, at an average selling price of 12.17 cents, the approximate cost being 7.95 cents at works, 0.66 cent for freights, insurance and selling expenses, and 0.30 cent for taxes, legal, and administrative expenses, a total of 8.91 cents. The sales of refined copper were 9,655,545 pounds, at an average price of 12.98 cents, the approximate costs being 8.20 cents at works and 0.96 cent as above for other costs, a total of 9.16 cents. There were inventoried at the beginning of the year 2,450,077 pounds of copper, and at the end the stock at works and on dock was 912,354 pounds.

The profit and loss account shows profits aggregating $500,419.52, which includes $74,326.57 for royalties on iron ore mined, tolls on converting outside copper matte, and on merchandise, while the expenditures include $7,500 to bond-issue account, $25,000 interest on $500,000 bonds, and $50,354.52 for depreciation. The sum of $61,785.74 was expended on construction. Two dividends aggregating $437,500 were paid. The capital stock is $5,000,000, of which $625,000 is in the treasury.

The second producer in Tennessee is the Ducktown Sulphur, Copper and Iron Company (Limited), with a production of about 3,000,000 pounds.

The following contribution by J. Parke Channing, president of the Tennessee Copper Company, upon furnace capacity and sulphuric acid possibilities, was given the *Engineering and*

Mining Journal, June 12, 1905, and published thereby in the work "Pyrite Smelting," pages 256, 264 and 265:

"Under normal conditions a furnace (of The Tennessee Copper Company) will treat 375 tons of sulphide copper per day, and, at that rate, should be in action about twenty-seven days per month; that is, each furnace may be expected to be down for one week every two months, thus giving the average ore per furnace per month about 10,000 tons. I believe in time we shall be able to exceed this, as we have frequently put through over 400 tons in 24 hours, not including the quartz flux.

"It is still a little too early to determine exactly what the commercial saving will be on pyrite smelting. We have certainly eliminated the roast yard expense, which amounts to 40 cents per ton. I believe that the blast-furnace expense per ton of green ore will be about the same; and I am of the opinion that we will save at least four pounds more of copper than we did in the old method.

"In addition to this, much to our gratification, we found that the gases from the furnace are so rich in SO_2 that we can make acid from them by the chamber process. This will give us a by-product, which will be of great value in the South for the purpose of making fertilizers, and not only will it operate toward reducing the volume of gases to the atmosphere, but will prove a source of considerable revenue. We are, however, providing the plant with a new stack 325 feet high (internal diameter twenty feet) so as to give us perfect draft, which is desirable in pyrite smelting, as without proper draught, and with gases leaking from the doors, the feed floor is by no means a comfortable place."

SULPHUR DIOXID DEFINITION.

Simon, in his Manual on Chemistry, page 101, defines sulphur dioxid to be "A colorless gas having a suffocating, disagreeable odor * * It is very soluble in water, forming sulphuric acid * * when inhaled in its pure state it is poisonous; when inhaled with air it produces coughing and irritation of the air passages."

The strength of sulphur dioxid to be obtained from incenerating the highest grade imported sulphur pyrites, for the purpose of manufacturing sulphuric acid is declared by Lunge, in

Vol. I, page 321, in authoritative work on Acid and Alkalies to be:

"8.59% by volume in burning pyrites." "This must be looked upon as maximum figures, which in practice can only be approached, but hardly ever reached, and which never ought to be exceeded" * * "In many factories the SO_2 is much below 8.59%, sometimes not above 6% of the volume of the gas."

NOTE—This per cent. (6) is the strength of the sulphur dioxid generated by the Tennessee Copper Company as shown by declarations of J. Park Channing, Pres., and affidavits of Chemist McCandless, previously filed.

USES OF SULPHURIC ACID.

The uses of sulphuric acid are defined by The New International Encyclopædia, Vol. XVI., pp. 225-226, as follows:

"Uses of Sulphuric Acid. The uses of sulphuric acid in the arts are extremely varied and of the highest importance. It forms the basis of manufacture of nearly all other acids and salts. Nitric, hydrocloric, acetic, picric, phosphoric, oxalic, tartaric, citric and stearic acids, chemical manures and fertilizers are all prepared by the agency of sulphuric acid. It is also used in the metallurgy of copper, cobalt, nickel, silver, platinum as well as in the preparation of sheet iron and wire for galvanizing and tinning; in the preparation of phosphorous, bromide, iodine potassium bycromate, ordinary ether and various ethers (q. v.), starch, glucose, sugar and various fermented drinks; in the manufacture of various parchment papers, cellulose, celluloid, high explosives, nitroglycerine, nitrobenzene, guncotton, smokeless powders, pyroxilene, etc.; in dyeing, calico printing and tanning; in refining mineral oils, tallow, benzine and paraffin; in the preparation of various sulphates, as those of ammonium, potassium, barium, magnesium, aluminum, iron, zinc, quinidine, quinine, strychnine, and others too numerous to mention and many of which have an extensive application in therapeutics."

NOTE—Over all the above uses, but two illustrations of the amounts required in the particular uses stated are available, viz.: Fertilizer and high explosives. Probably an equal amount is used in refining oils, sugar and glucose, but no record of the amount so used is available. The Census Bureau also publishes a statement of the sulphuric acid used in the manufacture of some of the acids mentioned in the year 1900. This use of acid in this connection has vastly increased.

The following report upon sulphuric acid and its percentage in other acids of chief commercial importance is contained in

Census Bulletin No. 210, of June 25, 1902, upon "Chemicals and Allied Products," pages 11, 15 and 16. The consumption there stated is based upon the compilation for the year 1900.

THE CONTACT PROCESS FOR THE MANUFACTURE OF SULPHURIC ACID.[1]

1. *Historical.*—The production of sulphuric acid is a matter of the greatest importance, as it is not only the foundation of the inorganic heavy-chemical industry and is used for many other purposes, but also has lately become a most important material in the organic dye-stuff industry, especially in the production of alizarine colors and of synthetic indigo. The contact process is causing a complete revolution in the methods of manufacture of sulphuric acid; hence on account of its historical development and present status should be of great interest. The historical development of this process may be divided into four periods.

First period: Phillips, in 1831, discovered the catalytic action of platinum in hastening the union of SO_2 and O to form SO_3.

Second period: Wohler and Mahla, in 1852, showed that many other substances besides platinum possess catalytic properties, and explained the character and course of the reaction.

Third period: Winkler used definite gas mixtures for the production of sulphuric anhydride, as it was then considered that only in this way could good quantitative yields be obtained.

Fourth period, the present one, is noted by the successful use of the furnace gases directly.

ACIDS, OTHER THAN SULPHURIC, BY KIND, QUANTITY AND VALUE: 1900.

KIND.	Number of Establishments.	Quantity.	Value.
		Pounds.	
Nitric	34	30,961,501	$1,454,909
Mixed	9	42,368,819	1,111,258
Muriatic	31	116,848,001	1,020,574
Boric	3	2,384,935	198,212
Acetic	12	26,660,565	426,892
Lactic and citric	3	3,886,382	335,297
Tartaric	4	2,677,004	781,603
Tannic	5	282,515	135,662
Gallic	3	141,291	20,275

It is to be understood that the quantities and values given in this table represent only the acids sold as such, or produced for sale in the establishments, for the actual production, in many cases, is much greater than that given above. Thus the first item on the list, nitric acid, is used in the making of the "mixed acids," which is the second item on the list. This mixed acid is not only manufactured in the acid factories and sold to explosive works, to manufacturers of pyroxylin for use in the making of plastics and of varnishes, and to other manufacturers, but many of the larger works now make the nitric acid which they consume in this manner. There is thus made and consumed more nitric acid than is sold as such, the production as reported amounting to 62,473,295 pounds, which is probably less than the total amount actually made for use and sale. Theoretically, 74.13 parts of nitric acid monohydrate can be made from 100 parts of pure sodium nitrate, but in practice, only 95 per cent. of this is condensed, while 5 per cent. passes to the towers. From this, then, there would be required 43,841 tons of nitrate of soda and 47,348 tons of sulphuric acid to produce the above-given quantity of nitric acid, and there would result as a by-product 52,609 tons of niter cake.

By "mixed acids" is meant mixtures of nitric and sulphuric acids which are employed in "nitrating" organic substances such as glycerin, cellulose, and carbolic acid. The commercial use of such a mixture began with the manufacture of nitrobenzene and picric acid, but it received its greatest impetus about 1862, when the commercial manufacture of nitroglycerin began. Originally the users of this mixed acid purchased the sulphuric and nitric acids and mixed them in the desired proportions for use, the acids being transported in separate carboys of glass.

Hydrochloric acid, commercially known as muriatic acid, is made by acting on common salt with sulphuric acid. The ordinary muriatic acid of commerce is an aqueous solution containing about 40 per cent. by weight of dry hydrogen chloride. For the amount of hydrochloric acid reported on this standard there would be required for its production 37,000 tons of common salt and 39,000 tons of sulphuric acid of 60° Beaumé, and there would be obtained in addition to the muriatic acid 47,000 tons of salt cake which consists of sodium sulphate together with some decomposed common salt and an excess of sulphuric acid.

Sales of fertilizers as reported by *The American Fertilizer*, the official organ of the Fertilizer Manufacturers' Association, May 6, 1906. The tables for 1905 embrace the fiscal year 1904-5, and 1904 the year 1903-4. The figures of the fiscal year of 1905-6 have not yet been made public.

ESTIMATES AND COMPARISONS IN SIX STATES FOR TWO YEARS.

The indications are that this year will witness the largest sale of commercial fertilizer ever known in Tennessee. The record of sales of tags for the first quarter of the year show an increase over the corresponding period of last year, and so far this quarter there has been an increase, according to the Nashville *American*. For 1905 there was an increase of sales of commercial fertilizer over the previous year of 3,000 tons, and it is not improbable that the increase this year will equal that of last year.

Notwithstanding these facts, however, the sales of commercial fertilizer in Tennessee are wholly insignificant as compared with the sales in other Southern States. These figures speak eloquently of the natural fertility and productiveness of the soils of this State. Although the crops of Tennessee are probably more diversified and a greater variety of products are grown than in any other Southern State, Tennessee farmers use only about one-third of the fertilizers used in Florida, which has a population of about one-third that of this State. In Georgia, which is but little larger in area and population than this State, the sales of fertilizers were nearly twenty times as great as those in Tennessee.

At $20 per ton, which is about the average price which fertilizers cost the farmers of the South, the agricultural interests of Georgia last year spent over $14,000,000 for commercial fertilizers, while the farmers of Tennessee spent less than $800,000 for the same purpose.

Next to Georgia, South Carolina spent more for fertilizers than any Southeastern State last year, the fertilizers sold in that State probably costing the farmers $10,000,000.

According to figures compiled by the American Agriculturist, the fertilizer sales in the South for the last year and the preceding year were as follows:

	1905	1904
Florida	111,271	114,072
North Carolina	425,000	435,000
Alabama	238,227	250,036
Tennessee	38,112	35,085
Georgia	713,582	689,916
South Carolina	521,758	475,896
Total	2,047,905	2,000,005

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fulton.

Personally appeared before the undersigned authority T. G. Hudson, who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is the Commissioner of Agriculture of the State of Georgia, and as such commissioner has within his custody and control the records of the State of Georgia, showing the amount of fertilizers sold within said State, together with names of all fertilizer manufacturers and mixers permitted to sell fertilizer and licensed to do business within said State.

During the year ending September 20, 1906, tags were sold for fertilizer and cottonseed-meal as follows: Fertilizers, 747,174.5; cottonseed-meal, 1,781,260, or a total of 836,237.5 of fertilizer material. The record for the thirty years immediately preceding is as follows:

COMPARATIVE TRADE IN FERTILIZERS.

The following table shows the number of tons for each of the last thirty seasons:

There were inspected during the season of 1874–5.....48,648 00 tons
There were inspected during the season of 1875–6.....55,316.00 tons
There were inspected during the season of 1876–7.....75,824.00 tons
There were inspected during the season of 1877–8.....93,178.00 tons
There were inspected during the season of 1878–9.....85,049.00 tons
There were inspected during the season of 1879–80.....119,583 00 tons
There were inspected during the season of 1880–1.....152,424.00 tons
There were inspected during the season of 1881–2.....125,327 00 tons
There were inspected during the season of 1882–3.....125,377.00 tons
There were inspected during the season of 1883–4.....151,849.00 tons
There were inspected during the season of 1884–5.....170,153.05 tons
There were inspected during the season of 1885–6.....160,705.00 tons
There were inspected during the season of 1886–7.....166.078.00 tons
There were inspected during the season of 1887–8.....208,007.39 tons
There were inspected during the season of 1888–9.....202,869.36 tons
There were inspected during the season of 1889–90.....288,112.30 tons
There were inspected during the season of 1900–1.....306 734.00 tons
There were inspected during the season of 1901–2.....296,342.00 tons
Tags were sold during the season of 1892–3 for.....307,519.30 tons
Tags were sold during the season of 1893–4 for.....315,612.00 tons
Tags were sold during the season of 1894–5 for.....226,532 20 tons
Tags were sold during the season of 1895–6 for.....335,617.80 tons
Tags were sold during the season of 1896–7 for.....401,979.10 tons
Tags were sold during the season of 1897–8 for.....424,081.00 tons
Tags were sold during the season of 1898–9 for.....342,869.30 tons
Tags were sold during the season of 1899–1900 for.....412,755.50 tons
Tags were sold during the season of 1900–1 for.....478,817.70 tons
Tags were sold during the season of 1901–2 for.....493,808.02 tons
Tags were sold during the season of 1902–3 for.....628,484.3 tons
Tags were sold during the season of 1903–4 for.....689,916 5 tons
Tags were sold during the season of 1904–5 for.....713,582.00 tons

The following fertilizer manufacturers and mixers are duly licensed and authorized to do business within the State of Georgia:

Armour Fertilizer Works ..... Atlanta, Ga.
Adair, A. D., & McCarty Bros. ..... Atlanta, Ga.
Arnold & Co ..... Elberton, Ga.
Albany Warehouse Co. ..... Albany, Ga.
Adrian Guano Co ..... Adrian, Ga.
Allison & Cannon ..... Lavonia, Ga.
Anderson & Co. ..... Commerce, Ga.
Atlanta Oil & Fertilizer Co. ..... Atlanta, Ga.
Atlanta Fertilizer & Improvement Co ..... Atlanta, Ga.
Arlington Manufacturing Co. ..... Arlington, Ga.
Blanchard, Humber & Co. ..... Columbus, Ga.
Brooks & Tabor ..... Royston, Ga.
Brooks & Tabor ..... Lavonia, Ga.
Brooks & Tabor ..... Hartwell, Ga.
Blackshear Manufacturing Co. ..... Blackshear, Ga.
Butler, Heath & Butler ..... Camilla, Ga.
Brown Bros ..... Elberton, Ga.
Bostwick Manufacturing Co. ..... Bostwick, Ga.
Baker, D. A. ..... Royston, Ga.
Blakely Oil & Fertilizer Co. ..... Blakely, Ga.
Busha, S. J. ..... Buford, Ga.
Bale, F. S. ..... Rome, Ga.
Bartow Investment Co. ..... Bartow, Ga.
Benton Supply Co. ..... Monticello, Ga.
Braselton Bros. ..... Braselton, Ga.
Brannon, W. A. & Co. ..... Moreland, Ga.
Butts, D. L. ..... Devereaux, Ga.
Buttrill Guano Co ..... Jackson, Ga.
Butler, Heath & Butler ..... Camilla, Ga.
Brown Guano Co. ..... Albany, Ga.
Barnett, E. A. ..... Washington, Ga.
Chickamauga Fertilizer Works ..... Atlanta, Ga.
Carmichael, J. R. ..... Jackson, Ga.
Coweta Fertilizer Co. ..... Newnan, Ga.
Cooper, W. W. ..... Flowery Branch, Ga.
Canon Oil & Fertilizer Co. ..... Canon, Ga.
Cochran & Co ..... Flint, Ga.
Central Oil & Fertilizer Co. ..... Cordele, Ga.

Cary, C. S. ..... Sparta, Ga.
Camp, H. W. Co. ..... Morcland, Ga.
Crittenden Guano Co. ..... Shellman, Ga.
Clements, R. E. & Son ..... Buena Vista, Ga.
Cartersville Fertilizer Co. ..... Cartersville, Ga.
Cumberland Fertilizer Co. ..... Cartersville, Ga.
Daniel Sons & Palmer Co ..... Millen, Ga.
Dance, C. H. ..... Toccoa, Ga.
Davisboro Cotton Oil & Fertilizer Co. ..... Davisboro, Ga.
Davis, W. A. & Co. ..... Macon, Ga.
Daniel, T. Z. & P. V. ..... Millen, Ga.
Dublin Fertilizer Works ..... Dublin, Ga.
Davison & Fargo ..... Augusta, Ga.
Davis Warehouse Co. ..... Columbus, Ga.
Davis, Edwin S. ..... Macon, Ga.
Danville Warehouse Co. ..... Danville, Ga.
Eastman Oil & Fertilizer Co. ..... Eastman, Ga.
Elberton Guano Co. ..... Elberton, Ga.
Everett Mercantile Co. ..... Pelham, Ga.
Empire State Chemical Co. ..... Athens, Ga.
Electric Fertilizer Works ..... Savannah, Ga.
Edwards, W. C., & Co ..... Toccoa, Ga.
Ezell, E. B., & Co ..... Eatonton, Ga.
Elrod, Sanders & Co. ..... Hartwell, Ga.
Furman Farm Improvement Co. ..... Atlanta, Ga.
Farmers Oil & Fertilizer Co. ..... Lavonia, Ga.
Farmers Oil & Guano Co. ..... Sandersville, Ga.
Farmers Cotton Oil & Fertilizer Co ..... Toccoa, Ga.
Fairburn Oil & Fertilizer Co. ..... Fairburn, Ga.
Flowery Branch Gin & Oil Co. ..... Flowery Branch, Ga.
Fort Gaines Fertilizer Co. ..... Fort Gaines, Ga.
Field, J. E., & Son ..... Cartersville, Ga.
Farmers Oil & Fertilizer Co ..... Dawson, Ga.
Fayette Fertilizer Co. ..... Fayetteville, Ga.
Georgia Chemical Works ..... Augusta, Ga.
Grovania Oil & Fertilizer Co. ..... Grovania, Ga.
Griffin Oil Co. ..... Griffin, Ga.
Greene County Oil Co. ..... Union Point, Ga.
Georgia Fertilizer & Oil Co. ..... Valdosta, Ga.
Georgia Fertilizer Co. ..... Columbus, Ga.
Ginn & Hendricks ..... Bowman, Ga.
Gleaton & Jones ..... Albany, Ga.

Home Mixture Guaano Co. ..... Columbus, Ga.
Hays, A. N. ..... Covington, Ga.
Hand Trading Co. ..... Pelham, Ga.
Harper & Hewell ..... Dewey Rose, Ga.
Hammock, Rish & Sons ..... Coleman, Ga.
Harris & Moore ..... Hampton, Ga.
Heard County Oil & Fertilizer Co..... Franklin, Ga.
Heard & Swift ..... Middleton, Ga.
Harris, R. S., & Son ..... Bethlehem, Ga.
Harwell, J. L. ..... Newborn, Ga.
Jelks, W. A. & Co ..... Hawkinsville, Ga.
Jones, W. O. & Co. ..... Elberton, Ga.
Jones, The W. E. Co. ..... Waynesboro, Ga.
Jones & Roberts Fertilizer Works ..... Macon, Ga.
Johnson, Brown & Co. ..... Albany, Ga.
Jackson Supply Co. ..... Baconton, Ga.
Jewell, E. H. ..... Gainesville, Ga.
Kitchens, T. L. ..... Mitchell, Ga.
Kelley, J. C. ..... Mitchell, Ga.
Killingsworth, E. W. ..... Fort Gaines, Ga.
LaGrange Mills..... Hawkinsville, Ga.
Louisville Manufacturing Co. ..... Louisville, Ga.
Lowe, T. J. ..... Mableton, Ga.
Lowrey Bros ..... Dawson, Ga.
Lewis & Son ..... Powder Springs, Ga.
Marietta Fertilizer Co ..... Atlanta, Ga.
Mallett & Nutt ..... Jackson, Ga.
Mitchell County Fertilizer Co. ..... Camilla, Ga.
Montezuma Manufacturing Co. ..... Montezuma, Ga.
Mutual Fertilizer Co ..... Savannah, Ga.
Mandeville Mills ..... Carrollton, Ga.
Maynard & Proctor ..... Forsyth, Ga.
Mabbett & Groover ..... Quitman, Ga.
Maret, A. J. ..... Lavonia, Ga.
Middle Georgia Oil & Fertilizer Co..... Dublin, Ga.
Middle Georgia Fertilizer Co..... Monticello, Ga.
Madison Fertilizer Co. ..... Madison, Ga.
Monroe Warehouse & Fertilizer Co. ..... Monroe, Ga.
Miller & Wansley ..... Lavonia, Ga.
McCaw Manufacturing Co. ..... Macon, Ga.
McRae Oil & Fertilizer Co. ..... McRae, Ga.
McDonald & Weaver ..... Cuthbert, Ga.

McDuffie Oil & Fertilizer Co. ..... Thomson, Ga.
McConnell, L. J. ..... Royston, Ga.
McNair & Young Co. ..... Wrens, Ga.
Neeley, R. C., Co. ..... Waynesboro, Ga.
Napier Bros. ..... Macon, Ga.
Nasworthy, F., & Co. ..... Dawson, Ga.
North Georgia Oil & Fertilizer Co. ..... Rome, Ga.
Old Dominion Guano Co. ..... Atlanta, Ga.
Oconee Oil & Fertilizer Co. ..... Athens, Ga.
Ocilla Oil & Fertilizer Co. ..... Ocilla, Ga.
Owens, A. J. ..... Canon, Ga.
Pittard, John T. ..... Winterville, Ga.
Pioneer Guano Co. ..... Albany, Ga.
Putney Fertilizer Co. ..... Putney, Ga.
Putnam Oil & Fertilizer Co. ..... Eatonton, Ga.
Pelham Oil & Fertilizer Co. ..... Pelham, Ga.
Perdue, W. J., & Bro. ..... Carrollton, Ga.
Pitts, I. H., & Son ..... Waverly Hall, Ga.
Pope Manufacturing Co. ..... Washington, Ga.
Perry, F. S., & Co. ..... Camilla, Ga.
Parker, P. N. ..... Gainesville, Ga.
Ramspeck, J. L. & Co ..... Decatur, Ga.
Ray, C. P. ..... Lavonia, Ga.
Royster, F. S., Guano Co. ..... Macon, Ga.
Redwine, W. W. ..... Fayetteville, Ga.
Rome Oil & Fertilizer Co. ..... Rome, Ga.
Southern States Phosphate & Fertilizer Co. ..... Augusta, Ga.
Swift Fertilizer Works ..... Atlanta, Ga.
Smith, T. N. & J. W. ..... Tennille, Ga.
Savannah Guano Co. ..... Savannah, Ga.
Smith, C. V. & Co. ..... Tennille, Ga.
Stevens, Martin & Co. ..... Carlton, Ga.
Skinner, C. W. ..... Waynesboro, Ga.
Schoen Bros. ..... Atlanta, Ga.
Smith, V. R. ..... Douglasville, Ga.
Smith, B. G., Supply Co. ..... Social Circle, Ga.
Shores, W. A. ..... Baldwin, Ga.
Strickland, A. J., Manufacturing Co. ..... Valdosta, Ga.
Southern Fertilizer & Chemical Co. ..... Savannah, Ga.
Stillmore Chemical Co. ..... Stillmore, Ga.
South Atlantic Fertilizer Co. ..... Valdosta, Ga.
Stevens, O. B. ..... Atlanta, Ga.

Simmons & Hill ..... Dawson, Ga.
Shirley, George ..... Bowersville, Ga.
Tabor & Almond ..... Elberton, Ga.
Tuscarora Fertilizer Co ..... Atlanta, Ga.
Tifton Fertilizer Co. ..... Tifton, Ga.
Tiller, Glenn & Co ..... Carlton, Ga.
Tabor, T. O., & Son ..... Elberton, Ga.
Union Fertilizer Co. ..... Atlanta, Ga.
Virginia-Carolina Chemical Co. ..... Atlanta, Ga.
Vidalia Chemical Co. ..... Vidalia, Ga.
Wilcox, Ives & Co. ..... Savannah, Ga.
Willingham, C. B. ..... Macon, Ga.
Walker Bros. ..... Griffin, Ga.
Warthen & Irwin ..... Sandersville, Ga.
Wright, W. W., & Co. ..... Jackson, Ga.
Wilkinson County Fertilizer Co. ..... Toomsboro, Ga.
Williams, J. M. ..... Auburn, Ga.
Wrens Trading Co. ..... Wrens, Ga.
Yow & Cooper ..... Avalon, Ga.
Yow & McMurray ..... Wrens, Ga.

The following mills and factories outside the State of Georgia are registered in this department for season 1905-'06:

Adams, The Co. ..... Jasper, Ga.
American Agricultural Chemical Co. ..... Baltimore, Md.
Atlantic Chemical Co ..... Norfolk, Va.
Ashepoo Fertilizer Co ..... Charleston, S. C.
Anderson Phosphate & Oil Co. ..... Anderson, S. C.
American Guano Co. ..... Nashville, Tenn.
Alabama Chemical Co. ..... Montgomery, Ala.
American Agricultural Chemical Co. ..... New York, N. Y.
Baugh & Sons Co. ..... Baltimore, Md.
Birmingham Fertilizer Co. ..... Birmingham, Ala.
Bradley Fertilizer Co. ..... Charleston, S. C.
Barker Chemical Co ..... Inglis, Fla.
Brode, F. W., & Co. ..... Memphis, Tenn.
Continental Fertilizer Co ..... Nashville, Tenn.
Cumberland Bone Phosphate Co. ..... Charleston, S. C.
Columbia Guano Co ..... Norfolk, Va.
Combahee Fertilizer Co ..... Charleston, S. C.
Dothan Guano Co. ..... Dothan, Ala.
Etiwan Fertilizer Co. ..... Charleston, S. C.
Empire Guano Co. ..... Nashville, Tenn.

Federal Chemical Co. ....Louisville, Ky.
Florida Manufacturing Co ....Madison, Fla.
Farmers Fertilizer Co. ....Montgomery, Ala.
Gadsden Fertilizer Co. ....Gadsden, Ala.
Goulding Fertilizer Co. ....Pensacola, Fla.
Grasselli Chemical Co. ....Birmingham, Ala.
Home Fertilizer Chemical Works .....Baltimore, Md.
Houston Guano Co. ....Dothan, Ala.
Johnson, W. B. & Co. ....Memphis, Tenn.
Louisville Fertilizer Co. ....Nashville, Tenn.
National Fertilizer Co. ... .Nashville, Tenn.
Nashville Guano Co. ....Nashville, Tenn.
Navassa Guano Co... ... ...Norfolk, Va.
Ober, G., Sons & Co... ... ...Baltimore, Md.
Pacific Guano Co. ....Charleston, S. C.
Painter, E. O., Fertilizer Works .....Jacksonville, Fla.
Powhattan Chemical Co. ... ...Richmond, Va.
Royster, F. S., Guano Co.....Macon, Ga., and Norfolk, Va.
Read Phosphate Co. .....Nashville, Tenn.
Richmond Guano Co. ... ...Richmond, Va.
Standard Chemical & Oil Co. .....Troy, Ala.
Standard Guano & Chemical Co. ... ...New Orleans, La.
Sanders Fertilizer Co. ... ...Jacksonville, Fla.
Scholze Bros. ... ...Chattanooga, Tenn.
Tennessee Chemical Co. ... ...Nashville, Tenn.
Tennessee Fertilizer Co. . ...Montgomery, Ala.
Tennessee Fiber Co. ... ...Memphis, Tenn.
Tindall, C. A. & Co. .....Memphis, Tenn.
Williams & Clark Fertilizer Co. .....Charleston, S. C.
Wilson & Toomer Fertilizer Co. .....Jacksonville, Fla.
Wells, J. Lindsey Co. ... ...Memphis, Tenn.

T. G. HUDSON,
Commissioner of Agriculture.

Sworn to and subscribed before me, this ..... day of September, 1906.

W. H. HARRISON,
Notary Public, Fulton county, Georgia.

DEPARTMENT OF COMMERCE AND LABOR
BUREAU OF THE CENSUS.
WASHINGTON.

June 12, 1906.

CENSUS OF MANUFACTURERS.

FERTILIZERS.

(Preliminary Summary.)

The director of the census announced to-day the result of the tabulation of the statistics of fertilizers for the calendar year 1904, forming a part of the census of manufactures of 1905, taken in conformity with the Act of Congress of March 6, 1902. The figures indicate that there has been a substantial increase in the manufacture of fertilizers, as compared with the statistics of 1900, which covered the fiscal year ending May 31st.

Comparative figures for 1905 and 1900 are shown in the following summary:

	1905	1900	PER CENT. OF INCREASE
Number of Establishments	400	422	5.2 (1)
Capital	$ 69,023,264	$ 60,685,753	13.7
Salaried Officials, Clerks, Etc.,			
Number	1,618	1,712	5.5 (1)
Salaries	$ 1,940,712	$ 2,124,972	8.7 (1)
Wage Earners,			
Average Number	14,201	11,581	22.6
Wages	$ 5,142,147	$ 4,185,289	22.9
Miscellaneous Expenses	$ 4,919,824	$ 3,734,285	31.7
Materials Used,			
Total Cost	$ 39,343,914	$ 28,958,473	35.9
Products,			
Aggregate Value (3)	$ 56,632,853	$ 44,657,385	26.8
Fertilizers,			
Total Value	$ 50,506,294	$ 40,545,681	

STATISTICS CONCERNING THE MANUFACTURE OF FERTILIZER IN SELECTE
CALENDAR Y

	Alabama.	Delaware.	Florida.	Georgia.	Kentucky.	Louisiana.
Number of Establishments.	19	7	8	57	4	
Capital	$ 3,050,922	$ 205,554	$ 899,049	$ 11,158,070	$ 872,487	$ 2,143,8
Wage-earners:						
Average number	55:	149	242	2,192	57	3
Wages	$ 152,713	$ 33,371	$ 70,259	$ 581,184	$ 19,329	$ 122,9
Materials used:						
Total cost	$ 1,606,330	$ 287,414	$ 1,325,070	$ 6,527,065	$ 279,151	$ 1,013,6
Products:						
Aggregate value	$ 2,341,132	$ 370,889	$ 1,590,371	$ 9,461,415	$ 439,111	$ 1,556,2

Gross total of States listed, $47,320,166.

TATES, AS REPORTED AT THE CENSUS OF 1905, WHICH COVERS THE
AR 1904.

Maryland.	Mississippi.	New Jersey.	North Carolina.	Pennsylvania.	South Carolina.	Tennessee.	Virginia.
39	5	25	27	43	20	10	37
$ 6,058,246	$ 1,018,733	$ 6,290,706	$ 3,697,799	$ 5,386,058	$ 7,086,878	$ 3,381,073	$ 4,871,810
1,256	348	1,139	908	958	1,071	781	1,801
524,353	$ 78,847	$ 637,320	$ 281,775	$ 446,564	$ 303,885	$ 209,593	$ 571,177
4,991,789	$ 857,412	$ 3,928,047	$ 2 217,756	$ 2,890,780	$ 2,692,031	$ 1,711,800	$ 3,240,675
6,631,763	$ 1,082,387	$ 5,851,914	$ 3,098,561	$ 4,094,978	$ 3,637,576	$ 2,700,561	$ 4 659,281

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fulton.

Upon due notice to appear before United States Commissioner to take testimony in this behalf, personally appeared R. F. Sams who, being duly sworn in the above-entitled cause deposes and says:

Deponent is engaged in the manufacture of commercial fertilizers and has been for the past twenty-five years and is now division manager of the manufacturing department Virginia-Carolina Chemical Company.

There are three distinct classes of fertilizers manufactured by said corporation, the same being known as acid phosphates, alkaline or potash, and acid and ammoniated fertilizers. Sulphuric acid enters largely into the composition of each of said fertilizers, the percentage of the acid, however, being different in each class.

The basis of all of said fertilizers is sulphuric acid and phosphate rock. Acid phosphate is composed of sulphuric acid and phosphate rock only, the amount of sulphuric acid used being dependent upon the grade and purity of the rock and its lime contents. In each case when the acid and rock are mixed there is a percentage of waste occasioned by the chemical action of the mixture and the evaporation incident to the heat and steam

generated thereby. The percentage of loss in gross weight is approximately 10 per cent., the same being about equally divided between the shrinkage in rock and evaporation of the sulphuric acid. For example, it often requires 1,050 pounds of rock and 1,200 pounds of acid to make a two-thousand-pound ton of acid phosphate.

As heretofore stated, in the manufacture of acid phosphate the percentage of acid required depends upon the phosphate rock used. Usually somewhat more acid is required than rock, the amount of acid necessary to produce a two-thousand-pound ton of acid phosphate ranging from 1,000 to 1,200 pounds.

Of the two remaining classes of fertilizer acid phosphate forms the base, which acid phosphate is mixed with ammoniates or potash and the other ingredients necessary to complete the fertilizer.

In the average alkaline or potash and acid fertilizer about 800 pounds of acid, 800 pounds of phosphate rock and 560 pounds of other ingredients are used to make a short (two thousand pound) ton of fertilizer.

In the ammoniated fertilizers slightly less acid and rock are used, there averaging about 750 pounds of acid, 750 pounds of rock and 650 pounds of other ingredients to make a short ton of such fertilizer.

In each case, as will be seen, the proportion of sulphuric acid to the phosphate rock is equal or in excess. The rock is not available in the manufacture of fertilizer without sulphuric acid. Probably all of the phosphate rock produced in America is used in the manufacture of fertilizers.

The relative per cent. of the sales of each of said three classes of fertilizers to the gross sales of fertilizers by deponent's company is as follows: Ammoniated 50 per cent., alkaline or potash and acid 20 per cent., and acid phosphate 30 per cent.

In order to obtain the sulphuric acid necessary for the conduct of said fertilizer business sulphur pyrites are purchased and shipped to said plant from Spain and elsewhere at an average approximate cost of $8.50 per ton. One ton of the highest grade pyrites, averaging 50 per cent. sulphur, produces nearly one ton of sulphur dioxid.

To obtain sulphuric acid the pyrites are incinerated and sulphur dioxid produced, which in turn is precipitated and converted. Practically the entire sulphur dioxid is used and converted and, notwithstanding the great strength of the gas generated, it being the manufacturer's object to get the highest

per cent. sulphur ore in order to make the strongest possible gas, practically no damage whatever is sustained from the fumes finally liberated as all sulphur dioxid has been exhausted prior to such liberation.

R. F. SAMS.

Sworn to and subscribed before me this — day of September, 1906.

B. T. SCHWAAB,
Notary Public, Fulton county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fulton.

After due notice to appear before United States Commissioner to take testimony in their behalf, personally appeared D. B. Osborne who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is engaged in the manufacture of commercial fertilizers and has been for the past twenty-two years, and is now manager of the Armour Fertilizer Works, Atlanta, Ga.

There are three distinct classes of fertilizers manufactured by said corporation, the same being known as acid phosphates, alkaline or potash and acid and ammoniated fertilizers. Sul-

phuric acid enters largely into the composition of each of said fertilizers, the percentage of the acid, however, being different in each class.

The basis of all of said fertilizers is sulphuric acid and phosphate rock. Acid phosphate is composed of sulphuric acid and phosphate rock only, the amount of sulphuric acid used being dependent upon the grade and purity of the rock and its lime contents. In each case when the acid and rock are mixed there is a percentage of waste occasioned by the chemical action of the mixture and the evaporation incident to the heat and steam generated thereby. The percentage of loss in gross weight is approximately 10 per cent., the same being about equally divided between the shrinkage in rock and evaporation of the sulphuric acid. For example, it often requires 1,100 pounds of rock and 1,150 pounds of acid to make a two-thousand-pound ton of acid phosphate.

As heretofore stated, in the manufacture of acid phosphate, the percentage of acid required depends upon the phosphate rock used. Usually somewhat more acid is required than rock, the amount of acid necessary to produce a two-thousand-pound ton of acid phosphate ranging from 1,000 to 1,200 pounds.

Of the two remaining classes of fertilizer acid phosphate forms the base, which acid phosphate is mixed with ammoniates or potash and the other ingredients necessary to complete the fertilizer.

In the average alkaline or potash and acid fertilizer about 750 pounds of acid, 725 pounds of phosphate rock and 675 pounds of other ingredients are used to make a short (two-thousand-pound) ton of fertilizer.

In the ammoniated fertilizers slightly less acid and rock are used, there averaging about 650 pounds of acid, 625 pounds of rock, and 850 pounds of other ingredients to make a short ton of such fertilizer.

In each case, as will be seen, the proportion of sulphuric acid to the phosphate rock is equal or in excess. The rock is not available in the manufacture of fertilizer without sulphuric acid. Probably in excess of 95 per cent. of the phosphate rock produced is used in the manufacture of fertilizers.

The relative per cent. of the sales of each of said three classes of fertilizers to the gross sales of fertilizers by deponent's company is as follows: Ammoniated 65 per cent., alkaline or potash and acid 20 per cent., and acid phosphate 15 per cent.

In order to obtain the sulphuric acid necessary for the conduct of said fertilizer business sulphur pyrites are purchased and shipped to said plant from Spain and elsewhere at an average approximate cost of $9.00 per ton. One ton of the highest grade pyrites, averaging 50 per cent. sulphur, produces nearly one ton of sulphur dioxid.

To obtain sulphuric acid the pyrites are incinerated and sulphur dioxid produced, which in turn is precipitated and converted. Practically the entire sulphur dioxid is used and converted and, notwithstanding the great strength of the gas generated, it being the manufacturer's object to get the highest per cent. sulphur ore in order to make the strongest possible gas, practically no damage whatever is sustained from the fumes finally liberated, as all sulphur dioxid has been exhaused prior to such liberation.

D. B. OSBORNE.

Sworn to and subscribed before me this 21st day of September, 1906.

L. B. JACKSON,
Notary Public, Fulton county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fulton.

Personally appeared H. A. Rogers who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is engaged in the manufacture of commercial fertilizers and has been for the past seven years, and is now manager of Swift Fertilizer Works, Atlanta, Ga.

There are three distinct classes of fertilizers manufacured by said corporation, the same being known as acid phosphates, alkaline or potash and acid and ammoniated fertilizers. Sulphuric acid enters largely into the composition of each of said fertiiizers, the percentage of the acid, however, being different in each class.

The basis of all of said fertilizers is sulphuric acid and phosphate rock. Acid phosphate is composed of sulphuric acid and phosphate rock only, the amount of sulphuric acid used being dependent upon the grade and purity of the rock and its lime contents. In each case when the acid and rock are mixed there is a percentage of waste occasioned by the chemical action of the mixture and the evaporation incident to the heat and steam generated thereby. The percentage of loss in gross weight is approximately 10 per cent., the same being about equally divided between the shrinkage in rock and evaporation of the sulphuric acid. For example, it often requires 1,100 pounds of rock and 1,150 pounds of acid to make a two-thousand-pound ton of acid phosphate.

As heretofore stated, in the manufacture of acid phosphate the percentage of acid required depends upon the phosphate rock used. Usually somewhat more acid is required than rock, the amount of acid necessary to produce a two-thousand-pound ton of acid phosphate ranging from 1,050 to 1,200 pounds.

Of the two remaining classes of fertilizer acid phosphate forms the base, which acid phosphate is mixed with ammoniates or potash and the other ingredients necessary to complete the fertilizer.

In the average alkaline or potash and acid fertilizer about 750 pounds of acid, 750 pounds of phosphate rock and 650 pounds of other ingredients are used to make a short (two-thousand-pound) ton of fertilizer.

In the amoniated fertilizers slightly less acid and rock are used, there averaging about 650 pounds of acid, 625 pounds of rock, and 850 pounds of other ingredients to make a short ton of such fertilizer.

In each case, as will be seen, the proportion of sulphuric acid to the phosphate rock is equal or in excess. The rock is not available in the manufacture of fertilizer without sulphuric

acid. Probably 95 per cent of the phosphate rock produced in America is used in the manufacture of fertilizers.

The relative per cent. of the sales of each of said three classes of fertilizers to the gross sales of fertilizers by deponent's company is as follows: Ammoniated 65 per cent., alkaline or potash and acid 20 per cent., and acid phosphate 15 per cent.

In order to obtain the sulphuric acid necessary for the conduct of said fertilizer business sulphur pyrites are purchased and shipped to said plant from Spain and elsewhere at an average approximate cost of $8.60 per ton. One ton of the highest grade pyrites, 50 per cent. sulphur, produces nearly one ton of sulphur dioxid.

To obtain sulphuric acid the pyrites are incinerated and sulphur dioxid produced, which in turn is precipitated and converted. Practically the entire sulphur dioxid is used and converted and, notwithstanding the great strength of the gas generated, it being the manufacturer's object to get the highest per cent. sulphur ore in order to make the strongest possible gas, practically no damage whatever is sustained from the fumes finally liberated, as all sulphur dioxid has been exhausted prior to such liberation.

H. A. ROGERS,

Sworn to and subscribed before me this —— day of September, 1906.

W. W. TRACY,
Notary Public, Fulton county, Georgia.

The production of phosphate rock, commercially useful only when mixed with an equal or greater weight in sulphuric acid, in the publication by the U. S. Geological Survey under the title, "The Production of Phosphate Rock," page 7, in the States of Tennessee, South Carolina and Florida for the past four years is declared to be as follows:

USES.

Phosphate rock is used altogether in the manufacture of artificial fertilizers and chemicals containing phosphoric acid.

PRODUCTION.

The following table gives the production of phosphate rock in the United States from 1902 to 1905, inclusive, based on the marketed product, classified by kinds or grades:

Production of phosphate rock in the United States, 1902-1905, based on the quantity marketed.

LONG TONS.

STATE.	1902.		1903.		1904.		1905.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Florida:								
Hard rock	429,384	$1,742,694	412,876	$1,988,243	531,087	$2,672,184	577,672	$2,993,732
Land pebble	350,991	810,792	390,882	885,425	460,834	1,102,993	528,587	1,045,113
River pebble	5,055	9,711	56,578	113,156	81,030	199,127	87,847	213,000
Total	785,430	$2,561,197	860,336	$2,986,824	1,072,951	$3,974,304	1,194,106	$4,251,845
S. Carolina:								
Land rock	245,243	$753,220	233,540	$721,303	258,806	$830,117	234,676	$774,447
River rock	68,122	166,505	25,000	62,500	12,000	31,200	35,549	103,722
Total	313,365	$919,725	258,540	$783,803	270,806	$861,317	270,225	$878,169
Tennessee:								
Brown rock							438,139	$1,509,748
Blue rock							44,031	121,486
White rock							689	2,155
Total	390,799	$1,206,647	460,530	$1,543,567	530,571	$1,745,054	482,859	$1,633,389

DEPARTMENT OF COMMERCE AND LABOR,
BUREAU OF THE CENSUS.
WASHINGTON, June 18, 1906.

CENSUS OF MANUFACTURES.

EXPLOSIVES.

(Preliminary Summary.)

The Director of the Census announced to-day the result of the tabulation of the statistics of explosives for the calendar year 1904, forming a part of the Census of Manufactures of 1905, taken in conformity with the Act of Congress of March 6, 1902. The figures indicate that there has been a very large increase in the manufacture of explosives in the United States, as compared with the statistics of 1900, which covered the fiscal year ending May 31st.

Comparative figures for 1905 and 1900 are shown in the following summary:

	1905.	1900.	Per cent. of Increase.
Number of establishments	124	97	27.8
Capital	$41,236,945	$19,465,846	111.8
Salaried officials, clerks, etc.			
Number	1,289	768	67.8
Salaries	$ 1,797,050	$ 914,477	96.5
Wage-earners:			
Average number	5,800	4,502	28.8
Wages	$ 3,308,774	$ 2,383,756	38.8
Miscellaneous expenses	1,657,655	1,096,604	51.2
Materials used:			
Total cost	$17,203,667	$10,334,974	66.5
Nitrate soda:			
Tons	133,034	88,524	
Cost	$ 5,608,557	$ 2,902,866	
Mixed acid:			
Pounds	105,552,404	66,906,146	
Cost	$ 3,093,429	$ 1,505,754	
Glycerine:			
Pounds	24,561,527	16,983,918	
Cost	$ 3,129,665	$ 2,016,557	
Sulphur:			
Tons	19,574	12,742	
Cost	$ 507,469	$ 317,383	
Sulphuric acid:			
Tons	18,298	7,864	
Cost	$ 247,301	$ 130,699	
Nitric acid:			
Pounds	2,699,500	467,587	
Cost	$ 122,047	$ 17,171	
Alcohol:			
Gallons	850,560	136,520	
Cost	$ 231,353	$ 57,937	
Aqua ammonia:			
Pounds	997,830	649,703	
Cost	$ 46,916	$ 11,303	
All other materials	$ 4,216,230	$ 3,375,304	
Products.			
Total value *	$29,602,884	$17,125,418	72.9
Gunpowder:			
Pounds	215,820,144	123,314,103	
Value	$ 8,919,460	$ 5,310,351	

Nitro-glycerine:		
Pounds	7,935,936	3,618,692
Value	$ 1,620,117	$ 783,299
Dynamite:		
Pounds	130,920,829	85,846,456
Value	$12,900,193	$ 8,247,223
Guncotton or pyroxylin:		
Pounds	293,970	228,342
Value	$ 167,322	$ 103,702
Smokeless powder:		
Pounds	6,009,855	2,973,126
Value	$ 3,938,073	$ 1,655,948
All other products	$ 2,057,719	$ 1,024,895

* Exclusive of 917,565 pounds of smokeless powder, valued at $452,604, and other products valued at $122,228, manufactured by two governmental establishments; also exclusive of 88,667 pounds of guncotton, valued at $59,000; 82,300 pounds of smokeless powder, valued at $15,800, and 16,000 pounds of fulminating mercury, valued at $40,400, made by establishments engaged primarily in the manfacture of other products.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fulton.

Personally appeared A. A. Smith who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and is engaged in business in the city of Atlanta therein as a dealer in fertilizer supplies and materials, including sulphuric acid, and is familiar with the market value of the same.

That the most recent quotations fixing the market value of sulphuric acid in tank cars at not less than carload lots, f. o. b. cars in the city of Atlanta is $10.40, and that said sum of $10.40 per ton is the approximate market value of said sulphuric acid.

A. A. SMITH.

Sworn to and subscribed before me, this 25th day of September, 1906.

HARVEY HILL,
Notary Public, Fulton county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fulton.

Personally appeared before the undersigned authority John M. McCandless who, being duly sworn, deposes and says:

Deponent is a chemist by profession and has been for the past twenty years, and is now Chemist for the State of Georgia, which office deponent has held for eight years.

Deponent has read the supplemental affidavit of J. Parke Channing, president of the Tennessee Copper Company, in which the maximum capacity of the present furnaces of said Tennessee Copper Company is declared to be 1,800 tons of ore per day, and that such ore will not carry in excess of 30 per cent. of sulphur.

Based upon the maximum capacity of said plant and upon the entire sulphur contents of said ore being converted into sulphur dioxid and also upon the whole of said sulphur dioxid being converted into sulphuric acid, the maximum capacity of the plant for the production of sulphuric acid would be, theoretically, 603,618.75 tons of chemically pure (H_2 SO_4) sulphuric acid per annum. These figures converted into weak acid, usually produced in chambers, would be equal to 965,687 tons of what is known as 50° Beaume acid, or chamber acid. These figures, however, represent the theoretical production

and presuppose that every ounce of sulphur is burned and converted without loss into $H_2 SO_4$ or monohydrated sulphuric acid or its equivalent in 50° sulphuric acid. In practice, as a matter of fact, this production would not be attained; Lunge (page 759) gives as a result of the best practice of a number of the best French and German works a yield of 270 of pure sulphuric acid on 100 of sulphur charged. On this basis, in practice, using 1,800 tons of 30 per cent. ore daily the annual production would be 532,170 tons of chemically pure sulphuric acid, or 851,206 tons of 50° or chamber acid.

JNO. M. MCCANDLESS.

Sworn to and subscribed before me, this 27th day of September, 1906.

GEO. A. T. STEVENS,
Notary Public, Fulton county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fulton.

Personally appeared before the undersigned authority W. M. Edwards and D. A. Jones who, being duly sworn herein, depose and say:

Deponent Edwards is a resident of Fulton county, Georgia, and is a photographer by profession.

Deponent Jones is a resident of Gilmer county, Georgia, and is a forester by profession, and has been for the past twenty-five years.

Deponent Edwards, with said Jones, during the early part of September, took twenty-three pictures of localities in Gilmer and Fannin counties, Georgia, which pictures are filed herewith and marked as exhibits A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, and X. It was impossible to make the camera clearly show the damage to the timber and vegetation, and only a close inspection of the pictures disclose the shriveled leaves of the worst damaged timber, photographically telling the tale of part of the injury. The pictures are as follows:

View A is taken from a point about two miles to the southward of the plant of The Tennessee Copper Company, and looking northward into Tennessee, in which direction the smoke from the furnaces of the plant is traveling. The smoke, however, had previously settled into the valleys in the left foreground, partly obscuring the mountains. The location of the Ducktown company's plan, about five miles distant, is disclosed by the smoke middle right of the picture.

Each of the small chimneys of the structure immediately adjoining the tall stack are used, as two are shown to be used in the illutration, as furnace vents, liberating the gases generated in the furnace when such furnace becomes too warm or the chimney draft too great. The smoke from the stack and the small chimneys usually quickly combine, as shown by subsequent pictures. The underbrush and vegetation shown in the picture had practically all been killed, the leaves being brown and seared.

View B shows the smoke of the stack and small chimneys or furnace vent combining, the smoke of the vents rising and of the stack falling, to do this making an apparently uniform body of vapor and gas. The smoke has not quite reached the earth. The camera for this picture pointed north by west, and shows the smoke which had been traveling northward into Tennessee turning toward Georgia. The grass in the foreground had sprung up during the spring and summer, but at the date the picture was taken, and before any frost, was brown and withered.

View C was taken from about the same general locality, the camera being pointed to the north. The smoke shown in the

picture is traveling southwestward towards Murray county, Georgia. It ascended about two hundred feet above the stack then turned at right angles and began to rapidly fall towards the ground. The fumes under this smoke are those liberated from the small chimneys or vents. This picture, as are, in fact, all the views taken from Georgia territory.

View D is taken from the same point as picture C, the wind having changed and turning the smoke further southward into Georgia. The smoke from the furnace vents has already fallen to the river bottoms below the plant, and from the tall stack is falling to the ground and widening out horizontally. There was practically no breeze at all at the time the picture was taken.

View E was taken from the same vicinity, the camera being pointed to the northeast. This view shows the desolate and barren hills and mountain sides with the top soil washed away. The two bushes in the foreground are dogwood which, more than any other shrub, seem able to resist the sulphur fumes. They are, however, badly injured. The shrubbery along one river bank seems in some manner to have been protected by the river current, and is but little injured. The smoke obscuring the mountain ranges in the background is the combined fumes from both furnaces. The fumes rising and shown at the upper right hand corner of the picture are from the Ducktown company's plant.

View F is taken from the same vicinity as E, and to the northwest from said point. This view shows hills, valleys and mountains with the top soil washed away and a territory practically wholly denuded of vegetation. The smoke has totally obscured the mountains in the extreme background, and forms a haze covering the nearer hills.

View G is taken from the same vicinity as the preceding views and on the same day, but after the wind had changed its direction and the smoke had drifted into Georgia. The territory embraced in this view is in Georgia, the plant of The Tennessee Copper Company being behind the photographer at an angle of about sixty degrees.

View H is taken from the same point as G, the camera pointing about due south into Georgia, the copper plant being directly behind the photographer. The smoke is so dense that but a comparatively short distance can be shown in the picture even in hazy and indistinct outlines.

View I is a picture taken about three-quarters of a mile from the plants looking up the Ocowee river, and shows the smoke settled in the river valley.

View J is taken in Georgia several miles south of the copper plants. Of the timber shown in the picture about 90 per cent. is dead, and the remainder in a dying condition.

View K is taken about a mile further up the Toccoa river, and away from the copper plants than J, and shows the uniform destruction of all timber. The leaves shown on the bushes in the foreground are about all killed.

View L is taken about two miles to the southwest of K, and shows timber which had then lost about four-fifths of its leaves, although it is of the hardwood variety, which does not begin to shed its leaves until about the middle of October.

View M is taken near Fightington creek, about two miles southeast of Chestnut Gap, and fifteen miles to the southward of the copper plants. The smoke is coming down the valley, and is so dense the mountains beyond the valley can hardly be distinguished.

View N is taken from a point about two miles to the southeast of the section embraced in view M, and is in the vicinity of the Toccoa river. The timber here shown seems to have been completely protected up to the present summer. At the time the picture was taken the foliage had been killed but a few days, but practically all is dead. While the difference in appearance between dead and living leaves is hard to distinguish in a picture, this view shows the foliage shriveled and blistered as though by a severe fire.

View O is taken in the neighborhood of Sugar creek, about eleven miles from Ducktown. The entire foliage shown in the picture has been killed and is brown, shriveled and falling from the trees.

View P is taken from the top of Rock mountain about nineteen miles airline from the plants of the copper companies. The camera is pointed directly towards the furnaces. The smoke has come down in such dense volume that it obscures the picture. The great destruction of timber in the lowlands shows even through the haze.

View Q is taken near Charlie creek, about a mile and a half distant from the preceding picture.

View R is taken from a mountain about twenty-two miles from Ducktown, looking away from the plants and toward

the town of Ellijay. What appears to be a lake is the smoke which has settled down in very dense volume.

View S is taken between Cherry Log and Blue Ridge, Georgia, about seven miles south of Blue Ridge. All the white pines shown in the picture have been killed and the foliage of the remaining timber looks burned and dead.

View T is taken on Rock Creek, about two miles from the town of Cherry Log, Georgia, about twenty-three miles from Ducktown. The dead timber along the upper mountain side is shown in the picture and the injured leaves on the nearer timber is disclosed by their shriveled appearance.

View U is taken about two miles east of the preceding picture. The smoke has so obscured the mountains in the background that the dead timber is not plainly shown.

View V was made near Cherry Log, on the L. & N. Railroad. All white pine shown in the picture has been killed and most of it during the present summer. The hardwoods have brown and withered leaves.

View W shows a hill-side several miles south of view V, and near the town of Whitepath, Ga. Practically all timber is dead or dying. The whitish, curled leaves in the foreground show the very resent death of the foliage.

View X is taken between the towns of Ellijay and Whitepath, about twenty-five miles from the plants of the copper companies. The white pine was so recently killed that it had not fully shed its foliage. The remaining leaves are brown and shriveled.

Deponents have also filed herewith a map of the Geological Survey of the United States, marked Exhibit Y, specifically indicating where said pictures were taken.

D. A. Jones,
W. M. Edwards.

Sworn to and subscribed before me, this 26th day of September, 1906

Harvey Hill,
Notary Public, Fulton county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a photographer by profession, and has been a resident of Gilmer and Union counties, Georgia, for the past thirteen years.

Deponent makes a specialty of our-of-door photography in the forests of Gilmer, Fannin and Union counties, Georgia, Polk county, Tennessee, and Cherokee county, North Carolina.

In pursuance of his vocation as above, has been in, over and through these various counties actively for the past five years, and in consequence is well acquainted with the timber, the orchards and farms of said territory.

Deponent has from time to time worked at the copper mines and smelters in Polk county, Tennessee, since these mines were actively at work, and is in consequence well acquainted with the fumes generated there, and knows their effects on timber, so that he is able to identify smoke damage when he sees it.

On August the 13th last, this deponent took the picture marked 11 of white pine and oak timber showing very serious smoke damage. This picture was taken about one mile North

of Whitepath, on the Blue Ridge and Ellijay road. Ten days prior to this, on August 3d, this deponent traveled this same road, and at this time the timber showing in this picture was not injured, so that the injury shown occurred in the time intervening between August 3, and August 13th. In this picture all the vegetation showing is badly damaged, the leaves badly browned. In the case of the oaks, the camera seems to make little distinction between green and brown leaves.

This deponent also took picture marked 12 on August 21st. This was taken on lot of land No. 186, in the seventh district, second section, Gilmer county, some fifteen miles from the defendants' smelters, and was of recent smoke injury.

Deponent also took picture marked 13. This was taken some seven miles northeast of Ellijay, and is a view of fresh virgin forest some twenty-two miles in airline from the smelters, and which forest was protected by a large mountain range intervening between the same and the defendants' furnaces. Also 14 was taken near the same place and at the same time; also 15 was taken some two miles further east. The last three pictures of vigorous uninjured forest were taken the second week in September, 1906.

.. ..

Sworn to and subscribed before me, this 26th day of September, 1906.

.. ..

Notary Public, Gilmer county, Georgia.

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In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of McCays, Polk county, Tennessee. That during the second week in June, 1906, he, in company with one Mosencal, a forestry student and photographer, together with a third party, traversed various roads throughout the counties of Fannin and Gilmer, in the State of Georgia, taking pictures here and there of vegetation, trees and forests of said counties. At that time there was no perceptible damage to vegetation.

Deponent since that time, to wit, during the second week in September, 1906, has been over the same roads in Fannin and Gilmer counties traversed as aforesaid. That on this last trip deponent was accompanied by Mr. Western C. Allen. On this last trip deponent noticed considerable injury to vegetation, which has evidently occurred since the trip he made in June above mentioned. Deponent noticed damage to the extent of one-fourth to two-thirds of the timber with the leaves badly browned, above proportions of damage to timber depending on the location. In many places where the timber had been ap-

parently healthy in June, at least half of the trees and bushes had shed their leaves and the ground was covered with same. The whole forest and surrounding country had the appearance of having been visited by a severe frost.

his
W. N. X BARCLAY.
mark.

Sworn to and subscribed before me, this the 19th day of September, 1906.

W. T. PICKETT,
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of Ellijay, Gilmer county, Georgia. That during the second week of September, 1906, this deponent, in company with Mr. W. N. Barclay, traversed various roads throughout Gilmer and Fannin counties, Georgia, with a view of thoroughly examining the timber and forestry along

said roads. Deponent states that they found the timber and foliage badly damaged throughout all of this territory; that the leaves were brown and seared, and much of the timber and bushes had been so badly damaged that they had shed their leaves. The whole forests and landscape having the appearance of having been visited by a very severe frost, and everything throughout the section appeared as though it were in late November, after the usual annual frosts had fallen in this country. This damage was not the same throughout the territory. It was much greater in some places than others, and varied from one-third to possibly two-thirds the timber affected. At no time during this trip were we out of sight of damage to the timber. This deponent can state of his own knowledge that no frost has fallen since early spring of this year, and this deponent attributes this whole damage to the fumes from defendants' furnaces. This deponent can further state of his own knowledge that this damage to the timber and foliage was recent, and had occurred since the trees put out in full leaf this spring, as plainly indicated by the leaves that had put out then being dead and withered on the trees or on the ground.

W. C. ALLEN.

Sworn to and subscribed before me, this the 19th day of September 1906.

W. T. PICKETT,
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically

identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist of vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

Particularly has this been the case during the spring and summer of this year, while heretofore, viz.: prior to May, 1906, these fumes were rarely ever noticed in deponent's neighborhood except late at night or early in the morning, but since this time these fumes have been present at times all hours of the day or night whenever the wind was from the direction of defendants' mines. Their appearance, too, has been marked more frequently and the fumes have been present in far greater strength and density than ever observed before. While before the spring and summer above mentioned, the destruction to timber and vegetation seemed to be accomplished gradually, since May of this year the destruction wrought has been much more signal than ever before known. Whenever said fumes deponent's neighborhoods immediately thereafter, viz., in the next three or four days the timber and vegetation that had been enveloped in said fumes and exposed thereto would immediately show the evil effects of the same. The leaves on the timber would turn brown, shrivel up and fall from the trees. The corn leaves would be burnt and shrivel. The leaves on the peas and beans would likewise be wilted, and even the ragweeds and other hardy plants would wilt and perish as if the whole section had been visited by a severe frost.

Since the above spring and summer the fumes seem to have been given an increased carrying power, and seemed to have been condensed and concentrated and made far more deadly.

They seem to have mounted higher altitude and been able to pass barriers of mountains and hills that hithertofore seemed to protect certain sections where no damage had heretofore appeared. Since the above time referred to these barriers have been passed and new sections have been blighted and devastated that have never before been visited. Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year have been raised throughout said section. The winter-growing crops consisting largely of wheat, rye, and small grain generally, and market or garden truck, of turnips, collards, mustards and greens and like winter-growing vegetables. The farms prior to the appearance of the fumes above mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia where deponent resides are exceedingly large and valuable. Among the species of trees found are white pine, yellow pine, hemlock, white and chestnut oak, and other varieties. The white pine, yellow pine, hemlock, and other conifers, or trees of the evergreen varieties being in leaf throughout the winter. Some species of timber in the forest, such as hickory and chestnut oak have been almost exterminated, and fruit trees throughout considerable areas are badly damaged. The destruction to timber, crops and orchards has been far greater during the spring and summer of 1906, and the territory showing destruction vastly widened and increased over anything ever before known. Each deponent knows of his own knowledge that since May of this year that the destruction to timber and vegetation has been multiplied many times over anything ever before experienced, and said destruction has been wrought and accomplished in much less time. Should the destruction o timber, orchards and crops continue in the future as it has sin May of this year, the complete and utter destruction of al timber and orchards is near at hand, as the destruction is already widespread.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
J. I. Davis	Farmer	48	Cartecay.
W. J. West	"	45	"
B. P. Adams	"	49	"
C. L. Goss	"	25	"
J. B. West	"	37	"
G. A. McClure	"	25	"
John Southern	"	33	Alto.
J. B. Williams	"	28	Cartecay.
J. F. Forester	"	18	"
J. E. Southern	"	30	Alto.
F. D. Reece	"	19	"
J. L. Osborn	"	35	Cartecay.
R. A. McClure	"	33	Alto.
W. L. Greeneway	"	28	Cartecay.
J. M. Reece	"	29	"
W. A. Holloway	"	31	"
J. P. Bearden	"	39	Alto.
C. C. Holt	"	53	Ficknetley.
J. H. Adams	"	57	Cartecay.
M. P. Forrester	"	22	"
W. A. Reece	"	27	"
H. J. Reece	"	34	"
J. C. West	"	30	"
J. B. Chastain	"	23	"
W. G. West	"	20	"
L. P. Bearden	"	23	Alto.
Grover West	"	21	Cartecay.
J. L. Kincaid	"	24	"
G. W. Reece	"	25	"
Chas. Kincaid	"	19	Alto.
D. P. Swainey	"	48	Cartecay.
G. L. Comer	"	50	"
J. I. Teem	Merchant	51	"
A. A. Sutton	Farmer	25	Ball Ground.
J. C. Holt	"	33	Alto.
D. M. Lyons	"	46	Cartecay.
J. B. Smith	"	46	"
W. A. Lowring	"	20	"
C. W. Kenimore	"	60	"
J. J. Bates	"	45	"
W. F. Mulinax	"	27	"
L. P. Mulkey	"	24	"
J. W. Reese	"	20	"
Judson Forester	"	25	Ellijay.
W. F. McHan	"	35	Cartecay.
J. W. Bailey	"	36	Ellijay.
A. R. Cantrell	"	35	Cartecay.
H. G. Cantrell	"	35	"
L. M. McClure	"	26	Alto.
J. W. Greenway	"	6	Cartecay.
J. W. Smith	"	24	"
M. K. Adams	"	45	"
L. C. Mulkey	"	17	"
H. L. Bourden	"	22	Alto.
W. E. Chastain	"	21	"

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
H. E. Anderson	Farmer	16	Alto.
W. C. Evans	"	34	Cartecay.
J. M. Chastain	"	22	Alto.
C. A. Joiner	"	26	"
L. M. Davis	"	22	Cartecay.
J. C. Walker	"	45	"
R. K. Adams	"	40	"
G. M. Holt	"	17	"
R. H. Evans	"	20	"
Rosco West	"	19	"
P. J. Mullinax	"	15	"
Asbury Mulinax	"	16	"

Sworn to and subscribed before me, this 15th day of September, 1906.

J. W. C. WEST, N. P.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer:

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character

of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprize or natural condition of affairs which ever has, does, or could produce either such haze, vapor or odor. Deponents have observed this vapor whenever the wind was fro mdefendants' mines. This vapor is dense in character, and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has, within the past two of three years, been a matter of repeated occurence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

Particularly has this been the case during the spring and summer of this year, while heretofore, viz.: prior to May, 1906, these fumes were rarely ever noticed in deponent's neighborhood except late at night or early in the morning, but since this time these fumes have been present at times all hours of the day or night whenever the wind was from the direction of defendants' mines. Their appearance, too, has been marked more frequently and the fumes have been present in far greater strength and density than ever observed before. While before the spring and summer above mentioned the destruction to timber and vegetation seemed to be accomplished gradually, since May of this year the destruction wrought has been much more signal than ever before known. Whenever said fumes have been noticed in unusual strength and volume in each of deponents' neighborhoods immediately thereafter, viz.: in the next three or four days, the timber and vegetation that had been enveloped in said fumes and exposed thereto would immediately show the evil effects of the same. The leaves on the timber would turn brown, shrivel up and fall from the trees. The corn leaves would be burnt and shrivel. The leaves on the peas and beans would likewise be wilted, and even the ragweeds and other hardy plants would wilt and perish as if the whole section had been visited by a severe frost.

Since the above spring and summer the fumes seem to have

been given an increased carrying power and seemed to have been condensed and concentrated and made far more deadly. They seem to have mounted higher altitude and been able to pass barriers of mountains and hills that hithertofore seemed to protect certain sections where no damage had heretofore appeared. Since the above time referred to these barriers have been passed and new sections have been blighted, and devastated that have never before been visited. Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year have been raised throughout said section. The winter-growing crops consisting largely of wheat, rye, and small grain generally, and market or garden truck, of turnips, collards, mustard and greens ,and like winter-growing vegetables. The farms prior to the appearance of the fumes above mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia where deponen- resides are exceedingly large and valuable. Among the species of trees found are white pine, yellow pine, hemlock, white and chestnut oak, and other varieties. The white pine, yellow pine, hemlock and other conifers, or trees of the evergreen varieties being in leaf throughout the winter. Some species of timber in the forest, such as hickory and chestnut oak have been almost exterminated, and fruit trees throughout considerable areas are badly damaged. The destruction to timber, crops and orchards has been far greater during the spring and summer of 1906, and the territory showing destruction vastly widened and increased over anything ever before known. Each deponent knows of his own knowledge that since May of this year that the destruction to timber and vegetation has been multiplied many times over anything ever before experienced, and said destruction has been wrought and accomplished in much less time. Should the destruction of timber, orchards and crops continue in the future as it has since May of this year, the complete and utter destruction of all timber and orchards is near at hand, as the destruction is already widespread.

NAME.	NUMBER YEARS IN COUNTY.	OCCUPATION.	DISTRICT AND SECTION.
B. L. Hensley	17	Tax Receiver	Town Creek.
A. C. Inge	36	L. C.	850 District.
James his mark × Traglin	10	Farm'r & lumberm'n	850 "
Richard L. Dotson	30	" "	850 "
M. J. Teem	1?	Farmer	1174 "
M. B. West	40	"	850 "
C. C. Ruseell	30	"	1135 "
L. H. Davenport	40	"	850 "
A. J. Harper	34	"	850 "
Wm. Ray	58	"	1135 "
C. H. Webb	45	"	850 "
J. H. Tuck	30	"	1136 "
R. L. Milton	35	R. R. Employee	850 "
Barnett Holt	35	Farmer	850 "
J. C. Searcy	35	Lumberman	850 "
G. W. Blaylock	50	Farmer	1174 "
O. D. Price	2	Mechanic	850 "
S. F. Pettit	43	Farmer	932 "
J. Shepard	3?	Railroad fireman	850 "
W. A. Kell	18	Farmer	850 "
T. T. Parker	40	"	950 "
R. P. Parks	46	"	958 "
M. V. Kell	29	Lumber	850 "
A. J. Pinson	52	Sheriff Gilmer Co.	850 "

Sworn to and subscribed before me, this 8th day of September, 1906.

W. H. GUDGER,
Clerk Superior Court, Gilmer county, Ga.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

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Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

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weeds and other hardy plants would wilt and perish as if the whole section had been visited by a severe frost.

Since the above spring and summer the fumes seem to have been given an increased carrying power, and seemed to have been condensed and concentrated and made far more deadly. They seem to have mounted higher altitude and been able to pass barriers of mountains and hills that hithertofore seemed to protect certain sections where no damage had heretofore appeared. Since the above time referred to these barriers have been passed and new sections have been blighted and devastated that have never before been visited. Much of the country in which deponent resides is devoted to agricultural purposes and heretofore two crops per year have been raised throughout said section. The winter-growing crops consisting largely of wheat, rye, and small grain generally, and market or garden truck, of turnips, collards, mustards and greens and like winter-growing vegetables. The farms prior to the appearance of the fumes above mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia where deponent resides are exceedingly large and valuable. Among the species of trees found are white pine, yellow pine, hemlock, white and chestnut oak, and other varieties. The white pine, yellow pine, hemlock, and other conifers, or trees of the evergreen varieties being in leaf throughout the winter. Some species of timber in the forest, such as hickory and chestnut oak have been almost exterminated, and fruit trees throughout considerable areas are badly damaged. The destruction to timber, crops and orchards has been far greater during the spring and summer of 1906, and the territory showing destruction vastly widened and increased over anything ever before known. Each deponent knows of his own knowledge that since May of this year that the destruction to timber and vegetation has been multiplied many times over anything ever before experienced, and said destruction has been wrought and accomplished in much less time. Should the destruction of timber, orchards and crops continue in the future as it has since May of this year, the complete and utter destruction of all timber and orchards is near at hand, as the destruction is already widespread.

NAME.	TIME	OCCUPATION	DISTRICT
W. C. Cloninger.....	30	Farmer.....	Ellijay
B. F. Ellington.....	60	"	"
W. M. Chastain.....	30	"	"
W. M. Mashburn.....	30	"	Cartecay
J. W. Dunn	35	"	Ellijay
John Strickland	30	"	"
Bascom Derden		"	"
M. E. Strickland		"	"
F. J. Ellington		"	"
T. C. Ellington.....		"	"
F. G. Ellington.....		"	"
Wm. Ellington.....	60	"	"

Sworn to and subscribed before me, this 15th day of September, 1906.

WM. ELLINGTON,
N. P. and ex-officio J. P.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to th eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character

of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist of vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

Particularly has this been the case during the spring and summer of this year, while heretofore, viz.: prior to May, 1906, these fumes were rarely ever noticed in deponent's neighborhood except late at night or early in the morning, but since this time these fumes have been present at times all hours of the day or night whenever the wind was from the direction of defendants' mines. Their appearance, too, has been marked more frequently and the fumes have been present in far greater strength and density than ever observed before. While before the spring and summer above mentioned, the destruction to timber and vegetation seemed to be accomplished gradually, since May of this year the destruction wrought has been much more signal than ever before known. Whenever said fumes have been noticed in unusual strength and volume in each of deponent's neighborhoods immediately thereafter, viz., in the next three or four days the timber and vegetation that had been enveloped in said fumes and exposed thereto would immediately show the evil effects of the same. The leaves on the timber would turn brown, shrivel up and fall from the trees. The corn leaves would be burnt and shrivel. The leaves on the peas and beans would likewise be wilted, and even the ragweeds and other hardy plants would wilt and perish as if the whole section had been visited by a severe frost.

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been given an increased carrying power, and seemed to have been condensed and concentrated and made far more deadly. They seem to have mounted higher altitude and been able to pass barriers of mountains and hills that hithertofore seemed to protect certain sections where no damage had heretofore appeared. Since the above time referred to these barriers have been passed and new sections have been blighted and devastated that have never before been visited. Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year have been raised throughout said section. The winter-growing crops consisting largely of wheat, rye, and small grain generally, and market or garden truck, of turnips, collards, mustards and greens and like winter-growing vegetables. The farms prior to the appearance of the fumes above mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

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NAME.	NO. YEARS IN COUNTY.	OCCUPATION.	DISTRICT.
C. W. Nealey	25	Farmer	Cartecay.
J. C. Nealey	15	"	"
Rolen Nealey	20	"	"
Jess Nealey	10	"	"
L. P. Puce	30	"	"
C. L. Bates	25	"	"
J. M Prince	50	"	"
J. H. M. West	50	"	"
Milton Holt	2	"	"
J. M. Ralston	3	"	"

Sworn to and subscribed before me, this 15th September, 1906.

J. W. C. WEST, N. P.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character

of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist of vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

Particularly has this been the case during the spring and summer of this year, while heretofore, viz.: prior to May, 1906, these fumes were rarely ever noticed in deponent's neighborhood except late at night or early in the morning, but since this time these fumes have been present at times all hours of the day or night whenever the wind was from the direction of defendants' mines. Their appearance, too, has been marked more frequently and the fumes have been present in far greater strength and density than ever observed before. While before the spring and summer above mentioned, the destruction to timber and vegetation seemed to be accomplished gradually, since May of this year the destruction wrought has been much more signal than ever before known. Whenever said fumes have been noticed in unusual strength and volume in each of deponent's neighborhoods immediately thereafter, viz., in the next three or four days the timber and vegetation that had been enveloped in said fumes and exposed thereto would immediately show the evil effects of the same. The leaves on the timber would turn brown, shrivel up and fall from the trees. The corn leaves would be burnt and shrivel. The leaves on the peas and beans would likewise be wilted, and even the ragweeds and other hardy plants would wilt and perish as if the whole section had been visited by a severe frost.

Since the above spring and summer the fumes seem to have

been given an increased carrying power, and seemed to have been condensed and concentrated and made far more deadly. They seem to have mounted higher altitude and been able to pass barriers of mountains and hills that hithertofore seemed to protect certain sections where no damage had heretofore appeared. Since the above time referred to these barriers have been passed and new sections have been blighted and devastated that have never before been visited. Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year have been raised throughout said section. The winter-growing crops consisting largely of wheat, rye, and small grain generally, and market or garden truck, of turnips, collards, mustards and greens and like winter-growing vegetables. The farms prior to the appearance of the fumes above mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia where deponent resides are exceedingly large and valuable. Among the species of trees found are white pine, yellow pine, hemlock, white and chestnut oak, and other varieties. The white pine, yellow pine, hemlock, and other conifers, or trees of the evergreen varieties being in leaf throughout the winter. Some species of timber in the forest, such as hickory and chestnut oak have been almost exterminated, and fruit trees throughout considerable areas are badly damaged. The destruction to timber, crops and orchards has been far greater during the spring and summer of 1906, and the territory showing destruction vastly widened and increased over anything ever before known. Each deponent knows of his own knowledge that since May of this year that the destruction to timber and vegetation has been multiplied many times over anything ever before experienced, and said destruction has been wrought and accomplished in much less time. Should the destruction of timber, orchards and crops continue in the future as it has since May of this year, the complete and utter destruction of all timber and orchards is near at hand, as the destruction is already widespread.

NAME.	TIME OF RESIDENCE. YEARS.	OCCUPATION.	DISTRICT.
Willis Wright		Farmer	7 dist. 2 sec.
W. G. Orton	30	"	" "
Quillin Week	28	"	" "
Joseph Allen	50	"	Skienah.
W. G. Stanley	35	"	7 dist. 1 sec.
W. G. Harris	60	"	Cartecay.
S. W. Parks	40	"	"
C. L. Reese	30	"	"
J. S. Burrell	38	Merchandise	"
J. M. Thompson	25	Farmer	Ellijay.
J. H. Jones	40	"	"
J. H. Johnson	35	"	"
Wilburn Weaver	20	"	"
L. M. Adams	25	"	"
G. W. Hanson	45	"	"
W. H. Martin	7	"	Board Town.
Loid Hanson	50	"	Ellijay.
O. N. Fain	49	"	Board Town.
J. W. C. West	40	Lumberman	Cartecay.
J. H. Griggs	50	Carpenter	Ellijay.
T. W. Craigo	50	Farmer	"
W. H. Gudger	35	Farmer & Clerk.	Seplant.
Wm. Simmons	32	Lumberman	Ellijay.
W. A. Walker	30	Farmer	"
B. A. Logan	50	"	"
E. M. Ray	56	"	"

Sworn to and subscribed before me, this 13th day of September, 1906.

WM. ELLINGTON,
Notary Public and ex officio Justice the Peace.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

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been given an increased carrying power, and seemed to have been condensed and concentrated and made far more deadly. They seem to have mounted higher altitude and been able to pass barriers of mountains and hills that hithertofore seemed to protect certain sections where no damage had heretofore appeared. Since the above time referred to these barriers have been passed and new sections have been blighted and devastated that have never before been visited. Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year have been raised throughout said section. The winter-growing crops consisting largely of wheat, rye, and small grain generally, and market or garden truck, of turnips, collards, mustards and greens and like winter-growing vegetables. The farms prior to the appearance of the fumes above mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia where deponent resides are exceedingly large and valuable. Among the species of trees found are white pine, yellow pine, hemlock, white and chestnut oak, and other varieties. The white pine, yellow pine, hemlock, and other conifers, or trees of the evergreen varieties being in leaf throughout the winter. Some species of timber in the forest, such as hickory and chestnut oak have been almost exterminated, and fruit trees throughout considerable areas are badly damaged. The destruction to timber, crops and orchards has been far greater during the spring and summer of 1906, and the territory showing destruction vastly widened and increased over anything ever before known. Each deponent knows of his own knowledge that since May of this year that the destruction to timber and vegetation has been multiplied many times over anything ever before experienced, and said destruction has been wrought and accomplished in much less time. Should the destruction of timber, orchards and crops continue in the future as it has since May of this year, the complete and utter destruction of all timber and orchards is near at hand, as the destruction is already widespread.

NAME.	LENGTH OF RESIDENCE YEARS.	OCCUPATION.	DISTRICT.
R. B. Evans	60	Farmer and Fruit	Carticay.
John Clontz	11	" "	Ellijay.
J. B. Weaver			
John F. Weaver			
L. M. Hagin	20	Farmer	Carticay.
J. C. Anderson	40	"	Tickanetley.
B. N. Johnson	40	Farmer	Carticay.
John L. Holt	50	"	"
G. W. Clayton	35	"	Bucktown.
E. H. Clayton	30	"	"
W. C. Walker	33	"	Tickanetley.
J. H. Holt	38	"	Ellijay.
Wm. Kinnins	50	"	Carticay.
A. L. Pinson	40	"	"
J. F. Brown	30	Blacksmith	"
J. S. Smith	40	Farmer	Diamond.
W. N. Cochran	25	Merchant	"
S. F. Stanley	10	Farmer	"
Henry Weaver	40	"	"
M. C. Holden	30	"	"
J. S. Plemons	50	"	Tickanetley.
D. K. Ralston	45	"	Carticay.
Elijah Storney	15	"	Tickanetley.
C. D. Cantrell	15	"	"
D. C. Cantrell	50	"	"
W. H. Cantrell	20	"	Carticay.
C. H. Simmons	25	Miller	"

Sworn to and subscribed before me, this 14th day of September, 1906.

WM. ELLINGTON,
Notary Public and ex officio Justice the Peace.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

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Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to th eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

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NAME.	LENGTH OF RESIDENCE YEARS	OCCUPATION.	DISTRICT.
J. M. Hill	15	Farmer	Tickanetley.
A. J. Holden	30	"	Diamond.
B. P. Weaver	15	"	Tickanetley.
W. L. Davis	25	"	"
W. M. Cochran	63	"	Diamond.
G. M. Neely	20	"	"
W. H. Waddell	45	"	"
Lit Weaver	20	"	Tickanetley.
J. B. Kimmars	30	"	Cartocoy.
C. N. Johnson	20	"	"
J F. Chadwick	10	"	"
R. G. Smith	12	"	"
Alfred Cantrell	30	"	"
W. F. Cantrell	23	"	"
W. F. Gibbs	30	"	"
J. O Akins	36	"	Tickanetley.
F C. Cantrell	26	"	Cartocoy.

Sworn to and subscribed before me, this 21st day of September, 1906.

WM. ELLINGTON, N. P.,
Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

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Particularly has this been the case during the spring and summer of this year, while heretofore, viz.: prior to May, 1906, these fumes were rarely ever noticed in deponent's neighborhood except late at night or early in the morning, but since this time these fumes have been present at times all hours of the day or night whenever the wind was from the direction of defendants' mines. Their appearance, too, has been marked more frequently and the fumes have been present in far greater strength and density than ever observed before. While before the spring and summer above mentioned the destruction to timber and vegetation seemed to be accomplished gradually, since May of this year the destruction wrought has been much more signal than ever before known. Whenever said fumes have been noticed in unusual strength and volume in each of deponents' neighborhoods immediately thereafter, viz.: in the next three or four days, the timber and vegetation that had been enveloped in said fumes and exposed thereto would immediately show the evil effects of the same. The leaves on the timber would turn brown, shrivel up and fall from the trees. The corn leaves would be burnt and shrivel. The leaves on the peas and beans would likewise be wilted, and even the ragweeds and other hardy plants would wilt and perish as if the whole section had been visited by a severe frost.

Since the above spring and summer the fumes seem to have

been given an increased carrying power and seemed to have been condensed and concentrated and made far more deadly. They seem to have mounted higher altitude and been able to pass barriers of mountains and hills that hithertofore seemed to protect certain sections where no damage had heretofore appeared. Since the above time referred to these barriers have been passed and new sections have been blighted, and devastated that have never before been visited. Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year have been raised throughout said section. The winter-growing crops consisting largely of wheat, rye, and small grain generally, and market or garden truck, of turnips, collards, mustard and greens ,and like winter-growing vegetables. The farms prior to the appearance of the fumes above mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia where deponen- resides are exceedingly large and valuable. Among the species of trees found are white pine, yellow pine, hemlock, white and chestnut oak, and other varieties. The white pine, yellow pine, hemlock and other conifers, or trees of the evergreen varieties being in leaf throughout the winter. Some species of timber in the forest, such as hickory and chestnut oak have been almost exterminated, and fruit trees throughout considerable areas are badly damaged. The destruction to timber, crops and orchards has been far greater during the spring and summer of 1906, and the territory showing destruction vastly widened and increased over anything ever before known. Each deponent knows of his own knowledge that since May of this year that the destruction to timber and vegetation has been multiplied many times over anything ever before experienced, and said destruction has been wrought and accomplished in much less time. Should the destruction of timber, orchards and crops continue in the future as it has since May of this year, the complete and utter destruction of all timber and orchards is near at hand, as the destruction is already widespread.

NAME.	LENGTH OF RESIDENCE. YEARS.	OCCUPATION.	DISTRICT AND SECTION.
I. W. Cain	34	Farmer	Town Creek.
G. W. Richards	25	"	Larches.
E. T. Ray	28	"	Town Creek.
D. M. Dover	40	"	Tails Creek.
W. C. Jenkins	21	"	" "
John M. Parks	61	"	Board Town.
M C. Bridges	16	Saw Mill	Ellijay.
J. W. Parker	60	Farmer	Tickannetley.
J. B. Taylor	25	"	Ellijay.
Henry Nelson	10	"	"
B. F. Evans	45	Merchant	Dyke.
G. R. Herron	20	Farmer	Tails Creek.
T. H. Bramlett	14	"	Cartecay.
Garrett M. Roberts	50	"	Tails Creek.
J P. Ray	50	"	1136.
Johnnie W. Davis	34	"	850.
William Steeder	34	"	Mt. Town.
R. W. Latta	28	"	" "
Wess Harris	34	"	" "
J. A. Gudger	76	"	850.
Lee Sluder	63	"	Cherry Log.
Monroe Sluder	31	"	" "
Joe Derveese	23	"	Tails Creek.
Jim Buckner	33	"	850.
S. J. Withrow	30	"	Tails Creek.
N. L. Osborn	75	"	Mt. Town.

Sworn to and subscribed to before me, this September 21, 1906.

W. H. GUDGER,
Clerk Superior Court, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character

of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist of vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

Particularly has this been the case during the spring and summer of this year, while heretofore, viz.: prior to May, 1906, these fumes were rarely ever noticed in deponent's neighborhood except late at night or early in the morning, but since this time these fumes have been present at times all hours of the day or night whenever the wind was from the direction of defendants' mines. Their appearance, too, has been marked more frequently and the fumes have been present in far greater strength and density than ever observed before. While before the spring and summer above mentioned, the destruction to timber and vegetation seemed to be accomplished gradually, since May of this year the destruction wrought has been much more signal than ever before known. Whenever said fumes deponent's neighborhoods immediately thereafter, viz., in the next three or four days the timber and vegetation that had been enveloped in said fumes and exposed thereto would immediately show the evil effects of the same. The leaves on the timber would turn brown, shrivel up and fall from the trees. The corn leaves would be burnt and shrivel. The leaves on the peas and beans would likewise be wilted, and even the ragweeds and other hardy plants would wilt and perish as if the whole section had been visited by a severe frost.

Since the above spring and summer the fumes seem to have been given an increased carrying power, and seemed to have

been condensed and concentrated and made far more deadly. They seem to have mounted higher altitude and been able to pass barriers of mountains and hills that hithertofore seemed to protect certain sections where no damage had heretofore appeared. Since the above time referred to these barriers have been passed and new sections have been blighted and devastated that have never before been visited. Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year have been raised throughout said section. The winter-growing crops consisting largely of wheat, rye, and small grain generally, and market or garden truck, of turnips, collards, mustards and greens and like winter-growing vegetables. The farms prior to the appearance of the fumes above mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia where deponent resides are exceedingly large and valuable. Among the species of trees found are white pine, yellow pine, hemlock, white and chestnut oak, and other varieties. The white pine, yellow pine, hemlock, and other conifers, or trees of the evergreen varieties being in leaf throughout the winter. Some species of timber in the forest, such as hickory and chestnut oak have been almost exterminated, and fruit trees throughout considerable areas are badly damaged. The destruction to timber, crops and orchards has been far greater during the spring and summer of 1906, and the territory showing destruction vastly widened and increased over anything ever before known. Each deponent knows of his own knowledge that since May of this year that the destruction to timber and vegetation has been multiplied many times over anything ever before experienced, and said destruction has been wrought and accomplished in much less time. Should the destruction o timber, orchards and crops continue in the future as it has sir May of this year, the complete and utter destruction of al timber and orchards is near at hand, as the destruction is already widespread.

NAME.	NO. YEARS RESIDENCE IN DISTRICT	OCCUPATION.	DISTRICT.
R. A. Pinson	27	Merchandising	Ellijay
W. C. Allen	44	"	"
H. B. Pritchett	27	Saw Mill	"
Wm. his mark ×Legg	46	Farmer	Cherry Log
Fannie May her mark ×Prinson	42	"	Ellijay
W. L. P. Crimmons	33	Lumberman	Boardtown
A. B. Rackley	56	Farmer	Ellijay
J. D. Stewart	50	"	Cherry Log
W. T. Pritchett	39	"	Ellijay
T. D. Henson	41	Carpenter	Ellijay, Ga.
G. V. Akins	28	Farmer	Cherry Log
L. D. Rodgers	63	"	Ellijay
W. M. Rodgers	43	"	"
A. W. West	33	Bridge Engineer	"
F. Holden	39	Poles, Ties	"
J. H. Ray	15	Clerk	"
K. H. Patterson	7	Mill	"
C. H. Padgett	35	Mechanic	"
F. E. Shippen	10	Lumberman	"

Sworn to and subscribed before me, this 13th day of September, 1906.

D. A. JONES,
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Each of deponents is familiar with the location of defendants' furnaces. Each of deponents has by reason of his residence, and the particular occupation in which he is now engaged become familiar with the physical situation and characteristics of the larger part of said county. He is acquainted with the soil, and the character thereof; the streams, the timber, the various species of trees which prevail in said forests; the general values of the land for agricultural and other purposes, and the general values of the trees for lumber and timber purposes.

Each of deponents says that the land when cleared of the trees, and particularly the land which is irrigated by streams, in his particular district is fertile, readily cultivated and pro-

duces in paying quantities corn, wheat and other crops. The soils is specially adapted for the raising of what is termed market truck.

Much of said county is devoted to agricultural purposes, and heretofore throughout said section to crops per year have been raised, the winter-growing crops consisting largely of wheat, rye, barley and small grain, and the garden or market truck of turnips, mustard, collards and the like. The farms have heretofore, and prior to the appearance of the hereinafter mentioned fumes, as a rule, been profitable to their owners, and have been cultivated from year to year, and were generally in good condition.

The timber interests in said section of the State are exceedingly large and valuable. The timber, either standing or cut, possesses a ready market. Many fine species of trees are to be found, such as the white pine, spruce, yellow pine, hemlock, hickory, white oak, chestnut, poplar, and a large number of other varieties, the white pine, spruce, yellow pine and other trees of the conifer or evergreen variety being in leaf throughout the entire winter.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eye and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponents have ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which has ever, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle towards the earth, and especially whenever the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence during each month. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

In the winter the smoke and vapor has heretofore been even more constantly present than during the summer previous, and clings more closely to the earth. This is especially true upon rainy, cloudy and foggy days, and when the atmosphere is dense, but the presence of the fumes and vapor is by no means confined to this character of weather.

During the spring and summer of 1906, the smoke and fumes have been more continuously present than at any time before, have appeared and remained present not only more constantly, but in greater volume and strength. In addition, the vapor was present at hours not theretofore customary, and remained for much longer periods. Prior to said spring and summer of 1906 the fumes were usually noticeable only at night, late in the afternoon, or in the early morning, but during the past few months same have been present at times during practically all hours of the day and night.

Prior to said period of time the timber in the district in which deponents lives was healthy, sound, in good condition, and there was no appearance of any cause generally affecting injuriously either the timber as a whole, or operating upon any particular species. Trees would occasionally here and there die from old age and random fires, lightning, or other individual causes. These were, however, normal occurences, and the great body and bulk of the timber was in a normal, healthful, thriving condition.

Within the period of time mentioned, and since the fumes and vapors emitted by the defendants' furnaces have been noticed in the district in which each deponent resides, the general condition of the forests have changed—the timber is dying rapidly. It is no longer in a healthy condition. Much of it is dead. The percentage of dead trees to live trees has passed from a natural, normal per cent. to one which is entirely unnatural and abnormal. Some of the species have become practically extinct, such as the chestnut oak and hickory. It is a fact that in the district in which each deponent lives these two varieties of trees have been to a large extent exterminated. These trees wither, cast their leaves in the summer long prior

to the fall, and die almost immediately. At the present rate of mortality of these two species it is a question of but a short time until they are absolutely exterminated in deponents' respective districts. In some of the districts of said county these trees have already become extinct.

Many other varieties of trees are showing similar effects, and are dying in substantially the same way, though requiring a greater length of time. Among these may be found the white pine, hemlock, white oak, the post-oak, and other varieties. Enormous quantities of these varieties are now in process of dying, the leaves wither and fall prior to the natural order of things. The leaves upon the white pine turn yellow. The trees disclose to the eye at a glance that they are in process of death. Trees showing these outward signs in the late summer often do not put out the following spring. The trees thus affected will not put out at the top. This, the most exposed part of the tree, is more quickly and readily affected than the under part, which is to a greater or less extent, protected by the surrounding trees and undergrowth. The trees die from the top toward the bottom.

Deponents do not know of any other cause from which the results indicated could spring than that of the haze or mist above mentioned. There is no other haze, mist, vapor or fumes in said county from any other cause. There has been during said period of time no peculiar or unusual climatic changes. There has been nothing unusual in any other physical or natural condition of affairs. There has been neither unusual drouth nor excessive rainfall.

Each of deponents has been ordinarily familiar with the usual insects and bugs which have been found for many years in his respective district. He has not within the past two or three years noticed or observed anything unusual either in number or variety of this form of natural life.

Deponents state that upon repeated occasions the haze or vapor mentioned above would settle upon the earth and come in physical contact with the crops that have been planted. In a single night after these fumes thus described would touch the vegetation it would be either entirely destroyed or seriously injured. It would wither and turn yellow summer-grown crops or vegetables as if a heavy frost had fallen upon them, though no frost had touched them, and utterly destroy the small grain and other winter-growing crops.

The same effect as that above described would be noticed upon the various orchards after one or more visitations, either the fruit being entirely destroyed or the product being small, dwarfed fruit entirely unfit for use.

Deponents state that in some of the districts of said county a number of farms have been abandoned because of the settling of these sulphur fumes from the defendants' furnaces upon the farm. Prior to the last few years none of these farms had, to deponents' knowledge, been afflicted in the way described. Said farms, prior to said times, had been cultivated in the usual, ordinary way, and produced the usual, ordinary results.

The destruction of timber, orchards, crops, gardens and vegetation generally throughout deponents' section has been much greater during the spring and summer of 1906 than during the same period of any previous years, and the territory in which said destruction was apparent has largely increased. Many farms throughout the locality in which this destruction is wrought have been abandoned as such, and deponents, from their knowledge of farming, state that no farm can be successful when subject to the conditions hereinbefore specified. The forests are likewise being ruined, and under said conditions will soon be wholly destroyed.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
J. P. Evans	U. P.	50	1091
B. P. Whitaker	Jury Commissioner.	50	1136
R. L. Smith	Merchant	60	932
H. S. Jones	Farmer	50	907
H. L. West	"	40	864
J. B. Scott	"	30	907
L. B. Holt	"	60	1136
T. G. Simmons	Rep.	11	850
his mark Jno. M. X Bingess	Farmer	3	850
his mark D. J X Godsey	"	50	1135
G. W. Panky	"	35	1274
J. D. Blaylock	"	43	850
J. W. Wilson	"	35	850
his mark J. W. X Moore	"	37	11th and 2d
his mark H. M. X James	"	36	850
G. W. Watkin	"	75	907
W. C. Plemony	"	50	850
W. H. Allen	Merchant	27	850

Sworn to and subscribed before me, this 12th day of September, 1906.

T. H. TABOR,
Ordinary Gilmer county, Ga.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Each of deponents is familiar with the location of defendants' furnaces. Each of deponents has by reason of his residence, and the particular occupation in which he is now engaged become familiar with the physical situation and characteristics of the larger part of said county. He is acquainted with the soil and the character thereof; the streams, the timber, the various species of trees which prevail in said forests; the general values of the land for agricultural and other purposes, and the general values of the trees for lumber and timber purposes.

Each of deponents says that the land when cleared of the trees, and particularly the land which is irrigated by streams, in his particular district is fertile, readily cultivated and pro-

duce in paying quantities corn, wheat and other crops. The soil is especially adapted for the raisin gof what is termed market truck.

Much of said county is devoted to agricultural purposes, and heretofore throughout said section to crops per year have been raised, the winter-growing crops consisting largely of wheat, rye, barley and small grain, and the garden or market truck of turnips, mustard, collards and the like. The farms have heretofore, and prior to the appearance of the hereinafter mentioned fumes, as a rule, been profitable to their owners, and have been cultivated from year to year, and were generally in good condition.

The timber interests in said section of the State are exceedingly large and valuable. The timber, either standing or cut, possesses a ready market. Many fine species of trees are to be found, such as the white pine, spruce, yellow pine, hemlock, hickory, white oak, chestnut, poplar, and a large number of other varieties, the white pine, spruce, yellow pine and other trees of the conifer or evergreen variety being in leaf throughout the entire winter.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eye and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponents have ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which has ever, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle towards the earth, and especially whenever the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during this summer. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

During the spring and summer of 1906, the smoke and fumes have been more continuously present than at any time before, have appeared and remained present not only more constantly, but in greater volume and strength. In addition, the vapor was present at hours not theretofore customary, and remained for much longer periods. Prior to said spring and summer of 1906 the fumes were usually noticeable only at night, late in the afternoon, or in the early morning, but during the past few months same have been present at times during practically all hours of the day and night.

Prior to said period of time the timber in the district in which deponents lives was healthy, sound, in good condition, and there was no appearance of any cause generally affecting injuriously either the timber as a whole, or operating upon any particular species. Trees would occasionally here and there die from old age and random fires, lightning, or other individual causes. These were, however, normal occurences, and the great body and bulk of the timber was in a normal, healthful, thriving condition.

Within the period of time mentioned, and since the fumes and vapors emitted by the defendants' furnaces have been noticed in the district in which each deponent resides, the general condition of the forests have changed—the timber is dying rapidly. It is no longer in a healthy condition. Much of it is dead. The percentage of dead trees to live trees has passed from a natural, normal per cent. to one which is entirely unnatural and abnormal. Some of the species have become practically extinct, such as the chestnut oak and hickory. It is a fact that in the district in which each deponent lives these two varieties of trees have been to a large extent exterminated. These trees wither, cast their leaves in the summer long prior to the fall, and die almost immediately. At the present rate of mortality of these two species it is a question of but a short time until they are absolutely exterminated in deponents' respective districts. In some of the districts of said county these trees have already become extinct.

Many other varieties of trees are showing similar effects, and are dying in substantially the same way, though requiring a

greater length of time. Among these may be found the white pine, hemlock, white oak, the post- oak, and other varieties. Enormous quantities of these varieties are now in process of dying, the leaves wither and fall prior to the natural order of things. The leaves upon the white pine turn yellow. The trees disclose to the eye at a glance that they are in process of death. Trees showing these outward signs in the late summer often do not put out the following spring. The trees thus affected will not put out at the top. This, the most exposed part of the tree, is more quickly and readily affected than the under part, which is to a greater or less extent, protected by the surrounding undergrowth. The trees die from the top toward the bottom.

Deponents do not know of any other cause from which the results indicated could spring than that of the haze or mist above mentioned. There is no other haze, mist, vapor or fumes in said county from any other cause. There has been during said period of time no peculiar or unusual climatic changes. There has been nothing unusual in any other physical or natural condition of affairs. There has been neither ususual drouth nor excessive rainfall.

Each of deponents has been ordinarily familiar with the usual insects and bugs which have been found for many years in his respective district. He has not within the past two or three years noticed or observed anything unusual either in number or variety of this form of natural life.

Deponents state that upon repeated occasions the haze or vapor mentioned above would settle upon the earth and come in physical contact with the crops that have been planted. In a single night after these fumes thus described would touch the vegetation it would be either entirely destroyed or seriously injured. It would wither and turn yellow summer-grown crops or vegetables as if a heavy frost had fallen upon them, though no frost had touched them, and utterly destroy the small grain and other winter-growing crops.

The same effect as that above described would be noticed upon the various orchards after one or more visitations, either the fruit being entirely destroyed or the product being small, dwarfed fruit entirely unfit for use.

The destruction of timber, orchards, crops, gardens and vegetation generally throughout deponents' section has been much greater during the spring and summer of 1906, than

during the same period of any previous years, and the territory in which said destruction was apparent, has largely increased. The forests are being ruined, and under said conditions will soon be wholly destroyed.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
J. R. Miller	Farmer & timberman	61	7th Dist. and 2d Sect.
D. S. Searcey	Farmer	30	" "
J. H. Allen	"	50	" "
J. M. Patterson	"	36	" "
H. A. Allen	"	42	" "
J. J. Turner	"	35	" "
T. G. Berry	"	8	10th Dist. "
L. J. Searcey	"	45	7th Dist. "
E. S. Green	Farmer & merchant	17	" "
H. P. Rodgers	Farmer	38	" "
G. P. Hice	"	44	" "
J. S. Holt.	"	50	" "
R. O. Harris	"	52	" "
J. S. Smith	Justice of Peace	56	10th Dist. "
B. R. James	Sec. Foreman	36	7th Dist. "
T. C. Patterson		24	" "
O. L. Searcey	Farmer	over 50	" "
W. A. Whitener	"	42	" "
R. F. Key	"	21	" "
Marvin Hice	"	20	" "
J. W. Adams	"	25	" "
W. P Tucker		25	" "
T. C. Bates	R. R. Employe	16	" "
L. M. Miller	Farmer	20	" "
W. E. Newberry	Mail contractor	18	6th Dist. and 1st Sect.
C. W. Whitener	Farmer	48	7th Dist. and 2d Sect.
T. Searcey		19	" "
A. M. Searcey	Merchant	30	" "
H. M. Miller	Farmer	33	" "
J. F. Sharp	"	34	" "
G. H. Hice	"	12	" "
V. S. Whitener	"	22	" "
M. C. Stanley	Lumberman	43	" "
A. B. Stanley	Farmer	10	" "
P. M. Miller	"	31	" "
Ben Whitener		26	" "
Edd. Searcey		17	" "
Willis W. Whitener		17	" "
Glover Pless		16	" "
Dave Whitener		18	" "
Spurgeon Searcey		17	" "
J. M. Tucker	Farmer	60	10th Dist. "

Sworn to and subscribed before me, this 28th day of August, 1906.

J. W. WHITENER,
J. P. and Notary Public, Gilmer county, Ga.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA—County of Gilmer:

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for the number of years set opposite his name, and is engaged in the business there specified.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor, which possesses a peculiar odor, and is foul and offensive.

Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of vegetation has been most marked during the spring and summer of 1906. In fact, the greatest injury to forests and vegetation has occurred within about the past six weeks. In many localities when the foliage seemed green and reasonably healthy in May, June, and even July, the leaves are now brown and seared, and frequently have wholly fallen from the trees and cover the ground as is usually the case in the late fall and early winter—after several frosts have fallen. These conditions are found in many localities previously immune from the injury.

The death of timber and vegetation has been much more speedily accomplished during the past few months than ever before. Formerly the timber injury seemed gradual, the leaves, after the presence of the fumes a few times, yellowing, and later falling mainly from the tree-tops and upper branches of the timber. This summer, however, immediately after a single visit of the fumes in the unusual strength, noticeable for the first time this spring and summer, the leaves would look scalded and blistered, would turn brown, and often wholly fall from the trees. Other vegetation, crops, gardens, and even weeds, show similar effects. Much timber is now utterly denuded of leaves, and even the underbrush shows great damage.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
F. M. Weeks	Farming	57	Noontootley.
J. M. Stanley	"	32	"
R. C. Stanley	"	50	"
Sunfield Stanley	"	12	"
E. L. Weeks	"	25	"
J. W. Keener	"	25	"
C. F. Leadford	"	40	"
W. A. Stanley	"	30	"
Christopher Davis	"	20	"
E. L. Stanley	"	60	"
M. F. Davenport	"	54	"
J. M. Suits	"	5	"

The injury to vegetation during the past sixty days has been unprecedented, far in excess of any injury heretofore.

Sworn to and subscribed before me, this 19th day of September, 1906.

J. M. WHITNER, J. P.,
Notary Public Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA--County of Gilmer.

Personally appeared the undersigned who, being duly sworn, in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for the number of years set opposite his name, and is engaged in the business there specified.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor, which possesses a peculiar odor, and is foul and offensive.

Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

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to forests and vegetation has occurred within about the past six weeks. In many localities when the foliage seemed green and reasonably healthy in May, June, and even July, the leaves are now brown and seared, and frequently have wholly fallen from the trees and cover the ground as is usually the case in the late fall and early winter—after several frosts have fallen. These conditions are found in many localities previously immune from the injury.

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NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
his J. B. + Wimpy mark	Farmer	26	958
C. H. Hill	Merchant	35	958
W. C Parks	Farmer	27	958
J. A. Plemson	"	35	958
his T. M. + Hill mark	"	29	958
John Harper	"	28	958
L. Harper	"	50	958
J. S. Harper	"	31	958
J. H. Harper	"	23	958
W. H. Plemons	"	27	850
J. B. Daves	"	44	958
C. A. Gates	"	22	958
D. V. Dillingham	"	30	850
L. J. Fowler		60	958
J. T. Lunsford	Farmer	30	850
W. E. Carrell	"	54	958
H. Rittenhause	"	25	850
B. W. Dillingham	"	38	850
R. L. Withrow	"	35	958
W. T. Drinan	"	30	Tail's creek.
E. F. Moreland	"	20	"
his J. T. + Cochran mark	"	56	850
his J. A. + Withrow mark	"	45	850
his James + Dupree mark	"	39	850
John H. Sellers	"	35	958

Sworn to and subscribed before me, this 18th day of September, 1906.

D. A. JONES.
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn, in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for the number of years set opposite his name, and is engaged in the business there specified.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor, which possesses a peculiar odor, and is foul and offensive.

Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of vegetation has been most marked during

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NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
John Lattia	Farmer	15	958.
J. D. Nelson	"	20	907.
E. J. Chastain	Tax Collector	33	932.
C. L. Chester	Farmer	20	850.
Charles Hall		10	850.
F. L. Rittenhouse		20	850.
J. D. Milton		20	958.
John Dale	Farmer	60	850.
H. J. Gautner	Farmer and Teacher	....	
J. G. Ellis	Merchant	35	1341.

Sworn to and subscribed before me, this 15th day of September, 1906.

T. H. TABOR,
Ordinary Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn, in the above-entitled cause, deposes and says:

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Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

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NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
J. R. Ray	Farmer	54	850 District.
W. J. Whittaker	"	23	850 "
A. R. Weaver	Merchant	7	White Path, Ga.
A. F. Chapman	Farmer	28	Boardtown.
W. A. Holloway	Engineer	35	"
J. H. Dale	Farmer	40	"
G. W. Holloway	Lumberman	37	"
W. F. Harris	"	27	"
W. R. Holleyfie'd			"
C. M. Holt	Farmer	47	Cherry Log.
H. C. Ho't	"		" "
D. L. Kopt	Miner		
W. T. Charles	Clerk in store	45	Ellijay, Ga.
E. F. Waters	Merchant	17	" "
W. A. Sutton	"	37	" "
J. W. Harper	"	77	" "
A. A. Scott	"	27	" "
J. E. Rogers	Blacksmithing	33	" "
T. J Pritchett	"	14	" "
J. N. Sellers	Butcher	50	" "
B. F. Quarles	"	23	" "
J. E. Tracy		22	" "
J. H. Elliott	Butcher	43	" "
J. M. Allen	Pole Inspector	32	" "
C. S. Knox	" "	5	" "
S. P. Holt	Farmer	66	" "
W. M. Hampton	"	3	" "

Sworn to and subscribed before me, this 14th day of September, 1906.

D. A. JONES,
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn, in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for the number of years set opposite his name, and is engaged in the business there specified.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor, which possesses a peculiar odor, and is foul and offensive.

Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of vegetation has been most marked during

the spring and summer of 1906. In fact, the greatest injury to forests and vegetation has occurred within about the past six weeks. In many localities when the foliage seemed green and reasonably healthy in May, June, and even July, the leaves are now brown and seared, and frequently have wholly fallen from the trees and cover the ground as is usually the case in the late fall and early winter—after several frosts have fallen. These conditions are found in many localities previously immune from the injury.

The death of timber and vegetation has been much more speedily accomplished during the past few months than ever before. Formerly the timber injury seemed gradual, the leaves, after the presence of the fumes a few times, yellowing and later falling mainly from the tree-tops and upper branches of the timber. This summer, however, immediately after a single visit of the fumes in the unusual strength, noticeable for the first time this spring and summer, the leaves would look scalded and blistered, would turn brown, and often wholly fall from the trees. Other vegetation, crops, gardens, and even weeds, show similar effects. Much timber is now utterly denuded of leaves, and even the underbrush shows great damage.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
C. A. Pritchett	Farmer	42	Ellijay.
W. M. Henson	"	17	"
M. A. Clonts	"	7	"
Wm. Parks	"	67	Mountain Town.
L. L. Newberry	"	22	" "
J. W. Fure	Lumberman	30	" "
John Orensberg.		22	Ellijay.
B. L. Hensley	Tax Receiver	17	Talona.
Z. Y. Flanigan	Farmer	45	Ellijay.
R. J. Goble	"	38	Town Creek.
W. A. Orme	Hotel Keeper	4	White Path.
H. C. Jones	Saw Mill	27	" "
Jos. Wood	" "	20	" "
C. R. Weaver	" "	15	" "
John Wright	Farmer	50	Carty Coy.
J. H. Waters	"	34	Ellijay.
J. S. Def re	"	20	Tailes Camp.
G. R. Davis	"	28	" "
W. A. Cox	"	43	Ellijay.
N. F. Parks	"	34	Boardtown.
N. L Tankersly	County School Com	30	Ellijay.
G. W. Stansel	Farmer	31	"
J. M. Barnes	"	37	Round Top.
E. D. Barnes	"	30	" "
N. C. Weeks	Lumberman	23	" "
H. P. Packley.	Farmer	26	" "

Sworn to and subscribed before me, this 18th day of September, 1906.

D. A. JONES,
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn, in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for the number of years set opposite his name, and is engaged in the business there specified.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor, which possesses a peculiar odor, and is foul and offensive.

Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of vegetation has been most marked during the spring and summer of 1906. In fact, the greatest injury

to forests and vegetation has occurred within about the past six weeks. In many localities when the foliage seemed green and reasonably healthy in May, June, and even July, the leaves are now brown and seared, and frequently have wholly fallen from the trees and cover the ground as is usually the case in the late fall and early winter—after several frosts have fallen. These conditions are found in many localities previously immune from the injury.

The death of timber and vegetation has been much more speedily accomplished during the past few months than ever before. Formerly the timber injury seemed gradual, the leaves, after the presence of the fumes a few times, yellowing and later falling mainly from the tree-tops and upper branches of the timber. This summer, however, immediately after a single visit of the fumes in the unusual strength, noticeable for the first time this spring and summer, the leaves would look scalded and blistered, would turn brown, and often wholly fall from the trees. Other vegetation, crops, gardens, and even weeds, show similar effects. Much timber is now utterly denuded of leaves, and even the underbrush shows great damage.

The timber is dying within the corporate limits of Ellijay, the county-site of Gilmer county, Ga. After this smoke has settled thickly in the valley at Ellijay, Ga., I have noticed that the weeds and vegetation in the fields and gardens turned brown and dries up to a considerable extent, immediately after the presence of these fumes, especially when there is no air current to carry away the said fumes, and they remain for a considerable time in our neighborhood. Complaint is general throughout this section as to the great damage that is being done by these fumes.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE YEARS.	DISTRICT.
T. H. Tabor.....	Ordinary and Probate Judge, Gilmer Co., Ga	51	Ellijay 850, G. M.

Sworn to and subscribed before me, this 17th day of September, 1906.

W. H. GUDGER,
Clerk Superior Court, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn, in the above-entitled cause, deposes and says:

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Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

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The Ducktown smoke has caused my beans, my fruit, both apples and peaches, and my fodder, to rot. The leaves of many of the trees in the forest have been killed by this smoke, and have fallen off. The extent of the damage done by this smoke for the last six weeks has been greater than ever before.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
Lemuel I. Fowler.....	Farmer	60	958

Sworn to and subscribed before me, this 17th day of September, 1906.

T. H. TABOR,
Ordinary Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn, in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for the number of years set opposite his name, and is engaged in the business there specified.

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Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

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The injury to vegetation during the past sixty days has been unprecedented, far in excess of any injury heretofore.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
R. C. Leadford	Farmer	41	7 dist. 2 sec.
H. G. Young	"	22	" "
W. L. Holt	"	51	" "
J. B Leatherwood	"	42	" "
R. L. Leatherwood	"	26	" "
James Leatherwood	"	23	" "
M. A. Allen	"	38	" "
J. H. Leatherwood	"	21	" "
J. F. Davenport	"	52	" "
J. R. Keener	"	18	" "
C. C. Hamby	"	1	" "
W. H. Lance	"	30	11 dist. 2 sec.
J. M. Turner	"	23	7 dist. 2 sec.
K. S Harris	"	22	" "
T. J. Gibson	"	19	" "
J. L. Gibson	"	30	" "
L. S. Key	"	20	10 dist. 2 sec.
Harley Sharp	"	21	7 dist. 2 sec.
E. H. Moore	"	65	" "
J. F. Greenway	"	5	" "
A. L. Bates	"	17	" "
B. L. Searcy	"	18	" "
C. A. Leadford	"	20	10 dist. 2 sec.
John E. Ledford	"	58	" "
J. G. Greenway	"	5	7 dist. 2 sec.
Charley Hice	"	9	" "
Harley Leatherwood	"	15	" "
S. B. Stanley	"	2	" "

Sworn to and subscribed before me, this 19th day of September, 1906.

J. W. WHITENER,
J. P. and Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned, who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 53 years, deponent's residence being in the Ellijay district of said county. Deponent is engaged in the business of United States deputy marshal, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper

ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine,

hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation: On August the 12th last, I left home early and went northwest into mountain. At this time deponent noticed the fumes unusually strong. At this time the timber along Ellijay and Dalton road that I traveled to reach Mountaintown, was apparently healthy and green. Deponent had occasion to travel the same road a week or ten days later, and observed that the timber had been badly damaged in that time. The leaves on the black, Spanish and red oaks were browned and seared; the spikes on the pines were likewise browned, and all the forest and bushes showed like it had all been visited by heavy frost.

This deponent has been United States deputy marshal in this district for the past seven years; prior to this was State Senator, also State representative; was clerk of the superior court; was county treasurer and tax-assessor, all of which occupations called me over and through all portions of the county of Gilmer. Deponent believes from his experience above set out that he has about as good knowledge of the county, the lands, the crops, orchards and forests as any man in the county. Deponent knows of his own knowledge that the fumes from defendants' plants have been present much more frequently in Gilmer county this spring and summer, and in far greater

strength and density, than ever before known, and the damage to crops, orchards and timber since spring, 1906, has been far greater than ever before experienced in this county. If these fumes be allowed to flow over this county in the future as they have since May, this year, and do as much damage as they have accomplished this summer, the forests and orchards of this county will be utterly ruined in a very few years, as damage is now widespread.

T. W. CRAIGO.

Sworn to and subscribed before me, this 19th day of September, 1906.

W. T. PICKETT,
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn, in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for the number of years set opposite his name, and is engaged in the business there specified.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor, which possesses a peculiar odor, and is foul and offensive.

Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of vegetation has been most marked during the spring and summer of 1906. In fact, the greatest injury to forests and vegetation has occurred within about the past six weeks. In many localities when the foliage seemed green and reasonably healthy in May, June, and even July, the leaves are now brown and seared, and frequently have wholly fallen from the trees and cover the ground as is usually the case in the late fall and early winter—after several frosts have fallen. These conditions are found in many localities previously immune from the injury.

The death of timber and vegetation has been much more speedily accomplished during the past few months than ever before. Formerly the timber injury seemed gradual, the leaves, after the presence of the fumes a few times, yellowing and later falling mainly from the tree-tops and upper branches of the timber. This summer, however, immediately after a single visit of the fumes in the unusual strength, noticeable for the first time this spring and summer, the leaves would look scalded and blistered, would turn brown, and often wholly fall from the trees. Other vegetation, crops, gardens, and even weeds, show similar effects. Much timber is now utterly denuded of leaves, and even the underbrush shows great damage.

This deponent is at present tax-receiver of Gilmer county, which office he has held six years. During all this time my official business caused me to visit every militia district in the county during the spring months of April, May and June of every year during all this time. Deponent has also visited this same county every fall, and is by reason of his seventeen years'

residence in the county, and his vocation and experience above set forth thoroughly acquainted with the whole county of Gilmer from end to end. Has had repeated business transactions with every taxpayer in the county, and is personally acquainted with every taxpayer on my digest.

Previous to my election as tax-receiver of the county, I had several years' experience in the lumber business, and am thus a good judge of timber and timber values.

During the early years of my rounds of the county, I particularly noticed the fine timber in the county, particularly the fine chestnut oak in Boardtown, Turniptown, Cherry Log, Diamond and Bucktown districts. Later I noticed that the hickory and chestnut oak timber were dying, and later still, the white pine. Until this summer the timber of nearly every variety has been dying rapidly, even taking the small bushes and ragweeds in many places.

At Cherry Log and Boardtown particularly, has this been true, the damage to these places having been accomplished in a very few weeks. From my personal knowledge of the whole county, I know that the damage to timber, fruit, farms, and all vegetation throughout Gilmer county, has been far greater and multiplied many times over anything ever before known in this county since May, 1906, above referred to. In my opinion, and I am certain from my personal association with nearly every man in the county, I am well qualified to judge, that if the fumes are spread over the county in the future as they have been since the spring of this year, all forestry and the farming interests of Gilmer county will be absolutely destroyed in the course of a few years, as the destruction since May, 1906, has been particularly severe and widespread.

B. L. HENSLEY, Tax-receiver.

Sworn to and subscribed before me, this 15th day of September, 1906.

L. A. JONES,
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn, in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for the number of years set opposite his name, and is engaged in the business there specified.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor, which possesses a peculiar odor, and is foul and offensive.

Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of vegetation has been most marked during the spring and summer of 1906. In fact, the greatest injury to forests and vegetation has occurred within about the past

six weeks. In many localities when the foliage seemed green and reasonably healthy in May, June, and even July, the leaves are now brown and seared, and frequently have wholly fallen from the trees and cover the ground as is usually the case in the late fall and early winter—after several frosts have fallen. These conditions are found in many localities previously immune from the injury.

The death of timber and vegetation has been much more speedily accomplished during the past few months than ever before. Formerly the timber injury seemed gradual, the leaves, after the presence of the fumes a few times, yellowing and later falling mainly from the tree-tops and upper branches of the timber. This summer, however, immediately after a single visit of the fumes in the unusual strength, noticeable for the first time this spring and summer, the leaves would look scalded and blistered, would turn brown, and often wholly fall from the trees. Other vegetation, crops, gardens, and even weeds, show similar effects. Much timber is now utterly denuded of leaves, and even the underbrush shows great damage.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
A. M. Johnson	Lumberman	31	Ellijay.
M. E. Suttor	Lumber	20	"
J. W. Holden	Farmer	35	"
H. A. Smith	"	37	"
J. H. Jay	"	13	"
E. W. Nelson	Marble cutter	13	"
W. D. Sparks	Farmer	68	Diamond
T. J. Long	Tanbark	62	Ellijay, Ga.
J. L. Demall	Teaming	14	"
H. H. Conner	Smith	34	"
P. G. Plumby		15	"
A. J. James	Farmer	50	"
T. A. Foster	"	35	"
J. D. Miller	"	45	"
M. Davenport	Farming	27	Bordtown.
D. F. Pelsh	Farmer	3	"
R. F. Ledford	"	20	907

Sworn to and subscribed before me, this 20th day of September, 1906.

D. A. JONES,
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA--County of Gilmer.

Personally appeared the undersigned who, being duly sworn, in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for the number of years set opposite his name, and is engaged in the business there specified.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor, which possesses a peculiar odor, and is foul and offensive.

Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of vegetation has been most marked during the spring and summer of 1906. In fact, the greatest injury

to forests and vegetation has occurred within about the past six weeks. In many localities when the foliage seemed green and reasonably healthy in May, June, and even July, the leaves are now brown and seared, and frequently have wholly fallen from the trees and cover the ground as is usually the case in the late fall and early winter—after several frosts have fallen. These conditions are found in many localities previously immune from the injury.

The death of timber and vegetation has been much more speedily accomplished during the past few months than ever before. Formerly the timber injury seemed gradual, the leaves, after the presence of the fumes a few times, yellowing and later falling mainly from the tree-tops and upper branches of the timber. This summer, however, immediately after a single visit of the fumes in the unusual strength, noticeable for the first time this spring and summer, the leaves would look scalded and blistered, would turn brown, and often wholly fall from the trees. Other vegetation, crops, gardens, and even weeds, show similar effects. Much timber is now utterly denuded of leaves, and even the underbrush shows great damage.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE YEARS.	DISTRICT.
W. C. Orme	Hotel man	4	White Path.
H. C. Jones	Saw Mill	27	"
Jos. Wood	"	20	"
C. R. Weaver	"	15	"
W. B. Jones	Teacher	28	Mt. Town.
R. F. Brown	Farmer	30	Oak Hill.
W. R. Rackley	"	21	Ellijay.
P. D. Brooks	"	1	"
Homer Moran	"	1	"
John Reece	"	32	Pike.

Sworn to and subscribed before me, this 22d day of September, 1906.

J. L. WEAVER,
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer:

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for the number of years set opposite his name, and is engaged in the business there specified.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor, which possesses a peculiar odor, and is foul and offensive.

Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of vegetation has been most marked during the spring and summer of 1906. In fact, the greatest injury to forests and vegetation has occurred within about the past six weeks. In many localities when the foliage seemed green and reasonably healthy in May, June, and even July, the leaves are now brown and seared, and frequently have wholly fallen from the trees and cover the ground as is usually the case in the late fall and early winter—after several frosts have fallen. These conditions are found in many localities previously immune from the injury.

The death of timber and vegetation has been much more speedily accomplished during the past few months than ever before. Formerly the timber injury seemed gradual, the leaves, after the presence of the fumes a few times, yellowing, and later falling mainly from the tree-tops and upper branches of the timber. This summer, however, immediately after a single visit of the fumes in the unusual strength, noticeable for the first time this spring and summer, the leaves would look scalded and blistered, would turn brown, and often wholly fall from the trees. Other vegetation, crops, gardens, and even weeds, show similar effects. Much timber is now utterly denuded of leaves, and even the underbrush shows great damage.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
J. C. Allen	Law	30	Ellijay, Ga.
Wm. Ellington	Farmer.	30	" "
B. L. Holden	Bank Cashier.	30	" "
J. W. C. West	Farmer.	32	Cartesay.
R. E. Smith	Merchant	30	Ellijay, Ga.
E. W. Wilkins	Physician	30	" "
H. M. Ellington	Postmaster.	40	" "
A. N. Davis	Farmer	50	" "
J. P. Chastain	Minister	70	" "
W. J. Plumley	Farmer	60	" "
J. B. Pinson	"	51	" "
A. M. Key	"	40	" "
J. O. Bennett	"	7	" "
W. P. Wells		27	" "
J. W. Withrow	Farmer	50	958 G. M.
C. H. Myers	Jeweler		
D. V. Miller	Farmer	43	958 District, Ga.
I. G. Smith			
C. B. Kelley	Liveryman	15	850 District, Ga.
B. C. Greer	Printer	34	850 " "
T. M. Defoor	Liveryman	39	850 " "

Sworn to and subscribed before me, this 12th day of September, 1906.

T. H. TABOR,
Ordinary Gilmer County, Ga.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned, who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color, and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and said smoke and fumes present in much greater volume and strength than theretofore observed. In addition where previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day or night.

These fumes and vapors have not appeared with equal frequency or volume in all parts of the county of deponent's residence, the same apparently being governed, in a measure, by the topography of the country. Prior to the past few months the appearance of the fumes was largely confined to valley lands, adjacent to, or radiating from, the Ducktown basin, or streams emptying therein, or lands unprotected by hilly or mountainous or other character of barriers. During the spring and summer of 1906, however, the fumes appear to have had greater carrying power, have reached higher altitudes, gone further, and passed barriers which theretofore protected localities previously immune therefrom. The fumes have not only appeared in localities theretofore exempt from same, and at greater distance from the plants of said copper companies, but said fumes were at time esent in said localities in greater

strength and volume than theretofore noticed by deponent in localities much nearer to defendants' plant. In sections where said smoke and fumes had theretofore been noticeable, said smoke and fumes would at times be present in greater strength and density than was customary when the fumes theretofore put in their appearance.

Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year were raised throughout said section, the winter-growing crops consisting largely of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and like winter-growing vegetables. The farms, prior to the appearance of the fumes and vapors mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia in which deponent resides, are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white and chestnut oak, and other varieties, the white pine, spruce, yellow pine, hemlock and other conifers or trees of the evergreen variety being in leaf throughout the winter. Since the appearance of said fumes conditions of forests, orchards and farms have changed. Large quantities of timber have died, orchards have been destroyed and killed, crops have failed, and much grain, which escaped to reach maturity, rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and fruit-trees throughout considerable areas are utterly ruined. The destruction of timber, crops, orchards and gardens has been greater during the spring and summer of 1906 than during any previous spring and summer, and the territory subject to such destruction much larger than ever before.

Under existing conditions farming throughout said section will soon be a thing of the past, as no farm can be successfully conducted under same. In addition, the complete and utter destruction of timber and orchards is near at hand, for, should the injury to and death of timber in the future progress as it has each year since the appearance of said fumes and vapors, but a short time will be required to complete the destruction which is already wide-spread.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
E. D. Watkins	Farmer	44	7th Dist. and 2d Sect.
W. L. Rodgers	"	33	" "
T. O. Wirley	"	35	10th Dist. "
E. B. Griffin	"	10	7th Dist. "
J. B. Allen	"	45	" "
W. H. Pettit	Timber	58	" "
R. C. Leadford	Farmer	63	" "
J. A. Holt	"	30	" "
N. B. Thomas	"	10	" "
J. W. Pettit	"	32	" "
A. L. Stuart	"	41	" "
Mrs. M. C. Watkins	"	20	" "
B. F. Collins	"	31	" "
Ben Pless	"	20	" "
Joe Pless	"	10	" "
S. Hones	"	20	" "

Sworn to and subscribed before me, this 17th day of September, 1906.

D. S. SEARCEY,
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned, who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, and mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color, and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and said smoke and fumes present in much greater volume and strength than theretofore observed. In addition where previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day or night.

These fumes and vapors have not appeared with equal frequency or volume in all parts of the county of deponent's residence, the same apparently being governed, in a measure, by the topography of the country. Prior to the past few months the appearance of the fumes was largely confined to valley lands, adjacent to, or radiating from, the Ducktown basin, or streams emptying therein, or lands unprotected by hilly or mountainous or other character of barriers. During the spring and summer of 1906, however, the fumes appear to have had greater carrying power, have reached higher altitudes, gone further, and passed barriers which theretofore protected localities previously immune therefrom. The fumes have not only appeared in localities theretofore exempt from same, and at greater distance from the plants of said copper companies, but said fumes were at times present in said localities in greater

strength and volume than theretofore noticed by deponent in localities much nearer to defendants' plant. In sections where said smoke and fumes had theretofore been noticeable, said smoke and fumes would at times be present in greater strength and density than was customary when the fumes theretofore put in their appearance.

Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year were raised throughout said section, the winter-growing crops consisting largely of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and like winter-growing vegetables. The farms, prior to the appearance of the fumes and vapors mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia in which deponent resides, are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white and chestnut oak, and other varieties, the white pine, spruce, yellow pine, hemlock and other conifers or trees of the evergreen variety being in leaf throughout the winter. Since the appearance of said fumes conditions of forests, orchards and farms have changed. Large quantities of timber have died, orchards have been destroyed and killed, crops have failed, and much grain, which escaped to reach maturity, rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and fruit-trees throughout considerable areas are utterly ruined. Many farms have been abandoned to wild lands or permitted forfeited to the State for non-payment of taxes. The destruction of timber, crops, orchards and gardens has been greater during the spring and summer of 1906 than during any previous spring and summer, and the territory subject to such destruction much larger than ever before.

Under existing conditions farming throughout said section will soon be a thing of the past, as no farm can be successfully conducted under same. In addition, the complete and utter destruction of timber and orchards is near at hand, for, should the injury to and death of timber in the future progress as it has each year since the appearance of said fumes and vapors, but a short time will be required to complete the destruction which is already wide-spread.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
J. M. Frady	Farmer	34	907 Dist. Boardtown.
J. A. Harper	"	10	" "
A. M. Jones	"	40	" "
R. L. Key	"	40	" "
A. G. Ward	"	45	" "
Edd Parks	"	15	" "
Will Lively	"	30	" "
Chris Plemons	"	24	" "
J. H. Smith	"	24	" "

Sworn to and subscribed before me, this 15th day of September, 1906.

J. S. SMITH,
J. P. and Notary Public, Gilmer county, Georiga.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said county, and is familiar with farming conditions, timber interests, farms, lands, orchards

and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, and mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than heretofore, and was present in greater volume and strength than heretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collars, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a

rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white, oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. On several occasions the smoke has settled in great strength, and immediately thereafter garden truck would wilt and look scalded; the blades of the corn wither, and even the leaves on the trees would shrivel up, turn brown and shortly afterward frequently fall to the ground, as is the case in the late fall.

E. D. Watkins, W. L. Rodgers, T. O. Wirley, E. B. Griffin, J. B. Allen, W. H. Pettit, J. A. Holt, R. C. Leadford, N. B. Thomas, J. W. Pettit, A. L. Stuart, Mrs. M. C. Watkins., B. F. Collins, Ben Jless, Jos. Pless, S. Harris.

Sworn to and subscribed before me, this 17th day of September, 1906.

D. S. Searcey,
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for fifty years, deponent's residence being in the Boardtown district of said county. Deponent is engaged in the business of farming and lumber, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enter-

prise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Amond the instances coming directly under the deponent's observation· On September 14th last the smoke settled down thick on a leading ridge in front of my home and all about my house. Before this time the timber and foliage was green, fresh and healthy. The next afternoon after the sun had shone on it at least one-third of all the timber and bushes showed brown and seared, as if it had been visited by a heavy frost. The fall flowers all around the house wilted also, as it hot water had been poured onto them.

This deponent is particularly familiar with the forests and timber throughout Gilmer county, having followed the lumber business in this county for some thirty years, buying, selling and manufacutring lumber for market. Has been familiar with the death and destruction of timber since the appearance of these fumes of defendants' in this county. From deponent's knowledge of the county, the timber and forests, gained by my thirty years' active experience connected with them, deponent knows of his own personal knowledge that the damage wrought this spring and summer to all crops, foliage, orchards and timber throughout Gilmer county, has been multiplied many times since May, 1906, over anything ever before experienced in this county. Particularly has this been true during and since the last six weeks.

Deponent knows of his own knowledge if this damage be not arrested and abated in the immediate future, and if same be allowed to increase in the future, as it has increased since May, 1906, that it will be only a matter of a very short time until all vegetation and timber in Gilmer county will be entirely ruined, as damage is already widespread.

This deponent has some 400 acres of choice timber that he has been saving for a number of years, and which he was not desirous of putting on the market at this time, but since the heavy destruction wrought among it this summer he is now

moving his saw-mill into it to cut it at once and save all of it he can.

A. M. JONES.

Sworn to and subscribed before me, this 18th day of September, 1906.

W. T. PICKETT,
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for fifteen to twenty years, deponent's residence being in the 907 G. M. district of said county. Deponent is engaged in the business of ..... and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defend-

ants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which de-

ponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation were upon July 11 and August 5, 1906; at said times the smoke appeared in great volumes of density and strength. Immediately thereafter the peas, beans, tomatoes and also sorn and ragweeds crumbled up, withered and died. Other vegetables were killed in a single day or night at other times, but upon said dates the damage and destruction was particularly great; prior to the present summer the damage was comparatively small and only occasionally to be found; at the present time it is general. Practicaly no locality in deponent's neighborhood has escaped; the damage has been enormous and whole bodies of timber has been destroyed in the last few months.

T. M. Jones	Santa Luca	22	Farmer.
G. C. Smith	" "	23	"
C. E Pritchett		30	Farming.
S. A. Clontz		43	"
G. C. Parks		18	"
H. J. Jones			Farmer.
M. C. Rogers	Ollie	20	"
D. T Dilbeck		46	"
Charles Patterson	Santa Luca	45	Miller.
W. I. McVey	" "	....	Farmer.

Sworn to and subscribed before me, this 6th day of September, 1906.

J. S. SMITH,
J. P. and Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for forty-one years, deponent's residence being in the Elijay district of said county. Deponent is engaged in the business of carpenter, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes,

and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among

the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the the deponent's observation: This deponent was at Turniptown church, Gilmer county, Ga., some thirty miles from defendants' works, Sunday, August 5, 1906. At this time the timber along the road I traveled was healthy, fresh and green. Deponent returned over the same road to the same country, viz.: Sunday, September 2, 1906, and in the meantime hundreds of trees had turned brown, as though the leaves had been frost-bitten. Many of these had shed their leaves, and could have been burnt had a match been applied.

Deponent noticed the gas and fumes of the defendants' furnaces thick and unusually strong in my neighborhood in East Ellijay on Friday, August 31, 1906. Immediately afterward I noticed my cabbage and beans were badly damaged, the leaves appeared as though they had been scalded, and the cabbages are ruined.

The leaves on the beans are shriveled and seared as though they were frostbitten, and are ruined.

Deponent has had some experience with saw-milling in this county, and is familiar with much of the timber in this county. Deponent knows of his own personal knowledge that the damage to timber and vegetation is far greater than ever before

known, and that since May, 1906, the destruction of timber and vegetation has been multiplied many times over anything he ever observed before.

T. D. KENSON.

Sworn to and subscribed before me, this 6th day of September, 1906.

D. A. JONES,
Notary Public.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer:

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, is a property-holder in said county, and is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the

eye to be a gray haze or vapor. It is perceptible to the eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the past few months. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among

the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Prior to the present spring and summer the injury throughout a considerable portion of deponent's district was comparatively small. During the present year, however, the destruction of vegetation has been enormous. During the present summer whole hills or mountain-sides of timber facing northward and toward Ducktown have been killed. Many neighborhoods not theretofore affected experienced great injury. Of the instances come specially under deponent's observation of vegetation killed in a single night were July 11th, and August 5, 1906. At said times the fumes were present in particularly dense form, and strong odor. Immediately after the presence of said fumes, August 5th, the beans, peas and tomatoes in deponent's garden withered and shriveled up. Other vegetation was destroyed on July 11th. The strength of the fumes and destruction wrought caused deponent to specially note the time. Other vegetables were killed at different times, but the destruction was not so great.

W. A. Whitener.	J. R. Miller.	T. G. Berry.
D. S. Searcey.	J. H. Allen.	R. O. Harris.
L. J. Searcey.	J. J. Turner.	G. H. Hice.

Sworn to and subscribed before me, this 28th day of August, 1906.

J. S. SMITH,
J. P. and Notary Public, Gilmer county, Ga.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer:

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, is a property-holder in said county, and is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enter-

prise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been

abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation were those of July 11th and August 5th, 1906. On said days the smoke was present in unusual volume, density and strength. After its appearance the beans, peas, tomatoes, and even corn and rag-weeds, shriveled up and withere. Other vegetation has been killed in a single day, but at said times the destruction was most widespread.

In many localities of the deponent's section no great injury was apparent until this spring and summer. This year even hills and mountainous barriers did not seem to stop the progress of the fumes. During the past few months, however, the damage has been enormous. Whole hillsides of timber have been utterly destroyed. Practically no part of deponent's district has been exempt, and where injury was previously noticeable, more damage has been done during the spring and summer of 1906 than in the entire time theretofore.

C. W. Whitener.	Marvin Hice.	H. W. Miller.
J. T. Hoke.	J. W. Adams.	J. F. Sharp.
G. P. Hice.	W. P. Tucker.	H. A. Allen.
J. W. Whitener.	L. M. Miller.	P. M. Miller.
J. S. Smith.	F. C. Bates.	J. M. Tucker.
O. L. Searcy.	A. M. Searcey.	

Sworn to and subscribed before me, this 28th day of August, 1906.

D. S. Searcey,
Notary Public, Gilmer county, Ga.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer:

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for forty-five years, deponents residence being in the tenth district, second section of said county. Deponent is engaged in the business of farmer and lumberman, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk.

Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation: On August 17th, this deponent noticed these fumes unusually strong at my home-place, situated in East Ellijay, Gilmer county. The next afternoon this deponent noticed the leaves and twigs on his young apple-orchard were badly affected. The leaves in next three or four days wilted, turned brown and seared like they had been scalded or visited by heavy frost, though no frost has occurred this summer. The leaves on the oak in the same neighborhood turned brown and are now falling fast, so that the ground is covered in many places so thick with this season's dead leaves that they would burn if a match were applied.

This deponent is well acquainted with the timber in this county, having been in this business for some time, and been in consequence all over and through the woods. This affiant knows of his own knowledge that since May, 1906, the destruction to timber, vegetation and crops all throughout this county, and deponent's home district especially, has been multiplied many times over anything ever before known, and should it be not stopped and devastation be as great hereafter as it has been since May above referred to, that the timber, orchards and all vegetation will shortly be ruined in Gilmer county.

W. H. Shepard.

Sworn to and subscribed before me, this 10th day of September, 1906.

W. T. Pickett.
Notary Public, Gilmer county, Ga.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer:

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for thirty-six years, deponent's residence being in the Ellijay district of said county. Deponent is engaged in the business of farmer, and is a proyerty-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk.

Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation: This deponent lives four miles north of Ellijay, and owns some 400 acres of land there, where he resides. Along about the midde of June the smoke from the mines dropped down thicker and stronger than I ever saw it. Before this time everything was green and thrifty on my place, and in my neighborhood. Within the next two days the ragweeds were parched and brown like hot water had been poured over them. The flowers and grass about the house was seared and wilted, and in a few days the flowers shed their leaves. The peas were likewise ruined and wilted like they had been visited by a heavy frost. I had a young orchard growing on my place, the leaves and all young and tender growth was wilted, and leaves turned brown. My timber, too, showed the evil effects, the leaves turning brown and all the country around seemed as if hit by a severe frost, though none has occurred this summer. The leaves now all throughout my timber, and all throughout my section, are falling like they do in early winter.

This deponent knows of his own knowledge that since the high stack has been in use, since Mal, 1907, that the damage to all vegetation in his neighborhood has been multiplied and high stack has been in use, since May, 1906, that the damage continues next season, as it has since May, 1906, all the timber, fruit trees and vegetation will be entirely ruined and killed in my neighborhood in another year, as at least half of it is

now dead. My home and lands above referred to are some twenty-four miles in an airline from the mines and smelters.

his
H. M. X JAMES,
mark.

Sworn to and subscribed before me, this 8th day of September, 1906.

T. H. TABOR,
Ordinary of Gilmer county, Ga.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for sixty years, deponent's residence being in the Cartecay district of said county. Deponent is engaged in the business of farmer and fruit-grower, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his lo-

cality, and is also familiar with the location of defendants' mines.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear(bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than thereofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appear-

ance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of timber and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and lookd as though it had experienced a severe frost.

This has been especialy the case during the past spring and summer. Among the instances coming directly under the deponent's observation: This deponent has a large apple and peach orchard containing some 700 trees, situated some eleven miles south of Ellijay, in Gilmer county, near the edge of Pickens county. On September 1st these fumes dropped down on my place enveloping everything. I noticed it particularly strong among my timber covering the face of the mountain. Before this time this timber was in good cordition. The timber, since, shows the evil effect of this smoke. The leaves on the chestnut and oak and walnut timber turned brown and have fallen, and all acted as if visited by a heavy frost, though none has been present this summer.

The destruction to timber and vegetation in my neighborhood has been far greater this summer than ever before observed, and the damage is much wider and covers far more territory than ever before. The damage above cited is some thirty-five miles from the furnaces of the defendants, in an airline.

If damage increase in the future as it has increased since May, 1906, in my judgment the whole forests and orchards in

my part of the county will be ruined, as damage is now widespread.

R. B. EVANS.

I have read the foregoing affidavit, and as I am a tenant on Mr. Evans' place, am acquainted with the timber and conditions there to-day, and know of my own knowledge that the above affidavit is correct and true.

Sworn to and subscribed before me, this 5th day of September, 1906.

L. J. MULKEY.
WM. ELLINGTON,
Notary Public and ex-officio J. P., Gilmer county, Ga.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer:

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for forty years, deponent's residence being in the tenth and second districts of said county. Deponent is engaged in

the business of farmer and lumberman, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor or fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character, and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than heretofore, and was present in greater volume and strength than heretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year throughout said section were harvested, the winter-growing

farm crops consisting mainly of wheat, rye and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost.

This deponent along about July 17, 1906, noticed those fumes as he was journeying along the Dalton and Ellijay road some two or three miles west of Ellijay, Ga. They were particularly strong and unpleasant. They could be seen plainly and they were offensive and had settled like a fog over the timber and surrounding country in this immediate neighborhood. At this time the timber and vegetation all about seemed green, thrifty and healthy. Some eight or ten days thereafter, viz., along the latter part of July, this deponent had occasion to travel this same road and in doing so it was apparent on every hand that the timber that was green and thrifty ten days previous when the fumes were first smelt so strong, had in the interval turned brown and were sered the same as if they had been visited by heavy frost or fire, and the leaves are now dropping from said trees and bushes. This deponent has repeatedly noticed these fumes throughout all sections of Gilmer county where he has visited and they appear far more frequent and

with much greater density than ever before in the history of this country. This deponent is familiar with the destruction wrought by these fumes prior to the spring of this year and has given affidavit previously in this same case. Since the spring of 1906 these fumes have been present much more frequently and in far greater strength than ever known before. While heretofore the damage to timber and vegetation was usually accomplished gradually, but since the spring and summer of this year and since the fumes have been present with so much greater frequency and such increased strength the destruction to timber and vegetation has been accomplished in a very short space of time. From deponent's knowledge of conditions generally throughout this county prior to the spring of 1906 and deponent's knowledge and acquaintance since this time, deponents states of his own knowledge that the destruction to timber and vegetation throughout his section has been multiplied many times over anything ever before known in these parts, and if relief be not had immediately and the present destruction continues as it has since May of this year all the forest, timber and orchards in Gilmer county will be ruined absolutely in the very near future.

A. E. SHARP.

I have read carefully the foregoing affidavit and know same to be true, particularly the part relating to the destruction to timber on the Dalton and Ellijay road in the neighborhood of Ellijay, Ga.

L. M. WITHROW.

Sworn to and subscribed before me, this 31st day of August, 1906.

W. T. PICKETT,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for ..... years, deponent's residence being in the Ellijay district of said county. Deponent is engaged in the business of farming and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge

of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been aban-

doned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation, on the 27th, 28th and 29th of August just passed this deponent observed these fumes and gases very strong, in fact stronger than ever before observed. These fumes enveloped the timber on my place some five miles north of Ellijay. In a day or two after this time I noticed about half of my timber where I had observed these fumes so strong was badly affected. The leaves turned brown and shriveled up and fell to the ground, and much of it was killed. In places on my land to-day the dead and withered leaves, that grew this year, lay on the ground dry and thick enough to burn were a match applied. All this timber put out green and healthy in the spring and has been killed since. At the same time my beans, peas, tomatoes, cabbage and potatoes all seemed as if they had been visited by slight frost, and none of these have produced as in seasons past. This deponent states of his own knowledge that since the erection of the high stack by the Tennessee Copper Company this spring that the damage to timber and vegetation in his own neighborhood and other districts adjoining has been multiplied over anything ever before known. This damage, too, seems to be accomplished in a much shorter time this spring, as said gases and fumes seem to have a much greater killing power. If this damage be not speedily arrested vegetation will be entirely ruined in this county, as the injury is now widespread.

H. S. Jones.

Sworn to and subscribed before me this 4th day of September, 1906.

T. H. Tabor, Ordinary.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer:

Personally appeared R. D. Ralston, who first being duly sworn in the above-styled and numbered cause, deposes and says:

Deponent is a resident, citizen and land-owner in the State of Georgia and county of Fannin. Deponent has resided in Fannin county for the past twenty-five years, and is thoroughly acquainted with the county of Fannin, the timber, crops, etc. Deponent is by profession a farmer and lumberman. Deponent heretofore has made affidavit in this same case relative to the destruction of timber and vegetation by the Ducktown fumes, and the damage heretofore has been quite heavy, but the damage since May, 1906, to timber and all vegetation by these fumes, has been far greater than during the whole twenty-five years preceding this. Deponent has noticed the smoke or fumes very often since May in his neighborhood, and this would be noticed at almost any time of the day whenever the wind seemed to be in the direction of defendants' mines and works, while heretofore, that is, prior to May of this year, this deponent never noticed the smoke in his neighborhood except late at night and early in the morning, when the atmosphere was damp and heavy.

There is a great deal of the country that this deponent is thoroughly acquainted with that never showed any evil effects of these fumes until this summer, and since which time much of the timber and vegetation has been killed in full leaf, the timber having put out in the spring in a healthy and vigorous condition, and has been killed since, particularly is this true on the Willscot mountain on the sides exposed towards the mines, where heretofore the timber had looked green, thrifty and healthy, it is now nearly all killed and ruined, so that the whole side of the mountain looks as though it were a deadening, all of which has occurred this summer, and there is no other cause to account for the destruction of the timber except the fumes from the defendants' mines, which have been present so frequently in this section.

R. D. RALSTON,

Sworn to and subscribed before me, this 14th day of August, 1906.

W. T. PICKETT,
Notary Public, Gilmer County, Ga.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared M. L. Mauney, who first being duly sworn in the above stated case, deposes and says:

That he is a resident of Murphy, Cherokee county, North Carolina. Deponent is fifty-three years of age, and is by profession a forester or timber man, and has been engaged in his vocation cruising, buying and selling timber lands and timber in the counties of Gilmer, Fannine, Union and Towns, State of Georgia, for the past four years, during which tmie this deponent has been constantly ir upon, over and through the timber in said counties and is thoroughly familiar with same, its market value, condition and location.

This deponent has been to the works of the above defendants in this case and has come in contact with the gases and fumes that are generated there, so that he has become thoroughly acquainted with same. Has also noticed the destruction of timber and vegetation caused by these fumes immediately about the different plants, and has traced these effects from said plants thirty-five or forty miles into the territory of this State. The destruction to timber and vegetation with rare exceptions grow less and less as the distance from the above plants increases. Deponent had heretofore noticed destruction to timber, such as hickory, white pine, chestnut-oak and chestnut in the mountains, usually on the north side, which is always the side towards Ducktown from this territory, where usually the best timber is always found. Since May this year deponent has noticed that this destruction has been multiplied many times over anything that he has ever noticed before. Deponent further states that during the month of May, June and July this year that he has often seen and smelt these gases from these defendants' works which would settle down in a particular country and would be strong and offensive to the smell. In a few days afterwards acres of timber in this neighborhood where the smoke had dropped would turn yellow and the leaves brown and shriveled up the same as if the timber had been deadened or struck by a heavy frost or fire, and the leaves would wither, dry up and fall off. This would occur with all varieties of timber in the locality where the smoke had visited and seemed to respect nothing. It would kill the old, young and all vegetation, making a clean sweep of everything on the ground. This has been particularly noticed in the Wilscott mountain, the Davenport mountain, and other mountains near them. Said mountains being situated in Fannin county, Georgia, some twenty miles from the defendants' works. Never before until this summer has this deponent seen or noticed these fumes anything like so

often, nor near so strong and in such a condensed form as they have appeared all throughout this territory at almost all hours of the day or night whenever the wind was from the direction of the defendants' plants. Particularly was this noticed during the months of May, June and July of this year above referred to.

During the above mentioned time and during deponent's experience in this State he has been actively employed in the woods by Lucius Beebe & Sons, of Boston, Mass., and the United States Leather Company. Deponent, from the tops of some of the mountains in this State has seen the high stack of the defendants, and has watched the smoke and fumes drift out of this stack and settle into the territory of this State, and this deponent knows from his own experience and observation that the fumes coming from this stack in their present concentrated form are far more deadly to all timber and vegetation than any other process that has been used in this territory for the past four years. The high stack in deponent's opinion and knowledge only tends to concentrate the fumes and gases and give them a better carrying power so that the prevailing winds drift them much further into the territory of this State, and make them far more deadly to all vegetation where they settle, as I have seen them do repeatedly during the months of May, June and July above referred to.

M. L. MAUNEY.

Sworn to and subscribed before me, this the 21st day of August, 1906.

W. T. PICKETT,
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared before the undersigned, W. F. Hampton, who being duly sworn on the above-styled case deposes and says:

That he was present at Harpertown when the defendant companies' representatives were taking affidavits in the above matter, that there it was represented to him, by said representatives of the copper companies, that they intended to put in an acid plant and condense and relieve the country of these obnoxious fumes, and that all they were asking was a little time in which to do it; said representatives stated that the present action of the State of Georgia would close them up and put them out of business. This deponent and many others, not wanting this institution put out of business entirely, did give permission for his name to be affixed to a certain petition. Deponent further says that if these companies were put out of business the country, being almost ruined, as at present, it would be a great loss to this community, as the people have been deprived of the use of their timber and lands, and it would be a great hardship to them.

The above ideas were repeatedly expressed, and argued by the parties in this meeting, and no doubt in the world caused

many to sign or give permission for their names to be affixed to the defendants' petition.

Deponent further states that he did not sign the petition of the defendants, and that he stated in the open meeting that if it was simply a question of a little time that the companies were asking, and nothing else, he would be willing to have his name affixed, but that he could not sign any petition against the interests of the farmers and the vegetation in this district, all of which he knew had suffered terribly.

W. F. HAMPTON.

Sworn to and subscribed before me this the 19th day of March, 1906.

W. T. PICKETT,
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned, who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, and mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color, and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and said smoke and fumes present in much greater volume and strength than theretofore observed. In addition where previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day or night.

These fumes and vapors have not appeared with equal frequency or volume in all parts of the county of deponent's residence, the same apparently being governed, in a measure, by the topography of the country. Prior to the past few months the appearance of the fumes was largely confined to valley lands, adjacent to, or radiating from, the Ducktown basin, or streams emptying therein, or lands unprotected by hilly or mountainous or other character of barriers. During the spring and summer of 1906, however, the fumes appear to have had greater carrying power, have reached higher altitudes, gone further, and passed barriers which theretofore protected localities previously immune therefrom. The fumes have not only appeared in localities theretofore exempt from same, and at greater distance from the plants of said copper companies, but said fumes were at times present in said localities in greater strength and volume than theretofore noticed by deponent in

localities much nearer to defendants' plant. In sections where said smoke and fumes had theretofore been noticeable, said smoke and fumes would at times be present in greater strength and density than was customary when the fumes theretofore put in their appearance.

Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year were raised throughout said section, the winter-growing crops consisting largely of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and like winter-growing vegetables. The farms, prior to the appearance of the fumes and vapors mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia in which deponent resides, are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white and chestnut oak, and other varieties, the white pine, spruce, yellow pine, hemlock and other conifers or trees of the evergreen variety being in leaf throughout the winter. Since the appearance of said fumes conditions of forests, orchards and farms have changed. Large quantities of timber have died, orchards have been destroyed and killed, crops have failed, and much grain, which escaped to reach maturity, rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and fruit-trees throughout considerable areas are utterly ruined. Many farms have been abandoned to wild lands or permitted forfeited to the State for non-payment of taxes. The destruction of timber, crops, orchards and gardens has been greater during the spring and summer of 1906 than during any previous spring and summer, and the territory subject to such destruction much larger than ever before.

Under existing conditions farming throughout said section will soon be a thing of the past, as no farm can be successfully conducted under same. In addition, the complete and utter destruction of timber and orchards is near at hand, for, should the injury to and death of timber in the future progress as it has each year since the appearance of said fumes and vapors, but a short time will be required to complete the destruction which is already wide-spread.

The destruction of timber and vegetation during the past few months, and especially June, July and August, 1906, has been enormous. Each month the injury has increased.

Some parts of the county theretofore protected have suffered greater damage during the present spring and summer than was theretofore experienced by unprotected localities during the entire time of defendants' operations. Throughout deponents' locality there has been hardly a farm or garden that has not had crops or vegetables to shrivel, wither and die after a single day or night of the presence of said fumes. Certain it is that the injury this summer is widespread and practically no one has escaped. In many localities more damage has been done during June, July and August, 1906, than was found during the entire time the defendants' plants was operated theretofore. In fact, such is the general result throughout deponents' section.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE YEARS.	DISTRICT.
John McNeely	Bookkeepr Union Tan.Co	25	Mineral Bluff.
A. F. Berton	Union Tannery	4	
W. A. Granway	"	49	
F. N. Moore	"	23	10 Dist. W. C.
W. J. Whitesides	"	2	
E E. Robinson	"		Union Co.
H. L. Ross	"	26	Fannin Co.
A. K. Barton	"	8	Union Co.
J. W. Dillad	"	43	Fannin Co.
R. Poe		6	" "
T. W. Davis		10	
Guss Bennet		1	
Jno. M. Davis		10	
W. D. Davis		9	
D. L Stanley		2½	
Bruce Mull		39	
E. J. Henry		28	
J. H. Gibb		32	
W. M. Robertson		8	
M. P. Davis			
U S. Mull		33	
Chas. Corn		23	
S. F. Dean		7	
W. J. Witt		25	
B. C. Mull		30	
E. H. Newton	Farmer	58	
F. M. Harper	"	48	Hot House.
Thos. J. Wilson	"	49	" "
S. L. Henson	"	35	" "
A. F. Mull	"	45	" "
Jas. B. Dickey	"	40	Mineral Bluff.
B. C. Mull	"	55	Hot House.
J. P. Dilland	"	53	" "
M. Farmer		40	Mineral Bluff.
L W. Smith		1	" "
J. J. Barnes		5	Fair Play.
W. R. McNelly		23	Mineral Bluff.
Fred Forrester		12	Hot House.
A. J. Bell			
R. H. Abercrombie		60	Morganton.
J. H. Ross		24	Mineral Bluff.
S. P. Henry		66	" "
T. H. Henry		24	" "
H. M. Henry		23	" "
J. F. Bramblett		3	" "
J. V. Smith	Farmer	20	" "
E. F. McGee	Clerk	1	" "
A. F. Christopher	M. D.	5	" "
G. P. Dicky	Merchant	53	" "
H. G. Dicky	"	30	" "
G. M. Dicky	"	54	" "
W. R Butt		33	" "
Ralet Hampton		8	" "
W. A. Black		7	" "
Wade Allen	Barber	30	" "
W. T. L. Dickey	Agt. River Tans. & Lum. Co	40	" "
C. G. Baugh	Timberman	48	" "

Sworn to and subscribed before me on the 29th day of August, 1906.

FRED FORRESTER,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned, who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous

copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, and mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color, and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and said smoke and fumes present in much greater volume and strength than theretofore observed. In addition where previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day or night.

These fumes and vapors have not appeared with equal frequency or volume in all parts of the county of deponent's residence, the same apparently being governed, in a measure, by the topography of the country. Prior to the past few months the appearance of the fumes was largely confined to valley lands, adjacent to, or radiating from, the Ducktown basin, or streams emptying therein, or lands unprotected by hilly or mountainous or other character of barriers. During the spring and summer of 1906, however, the fumes appear to have had

greater carrying power, have reached higher altitudes, gone further, and passed barriers which theretofore protected localities previously immune therefrom. The fumes have not only appeared in localities theretofore exempt from same, and at greater distance from the plants of said copper companies, but said fumes were at times present in said localities in greater strength and volume than theretofore noticed by deponent in localities much nearer to defendants' plant. In sections where said smoke and fumes had theretofore been noticeable, said smoke and fumes would at times be present in greater strength and density than was customary when the fumes theretofore put in their appearance.

Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year were raised throughout said section, the winter-growing crops consisting largely of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and like winter-growing vegetables. The farms, prior to the appearance of the fumes and vapors mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia in which deponent resides, are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white and chestnut oak, and other varieties, the white pine, spruce, yellow pine, hemlock and other conifers or trees of the evergreen variety being in leaf throughout the winter. Since the appearance of said fumes conditions of forests, orchards and farms have changed. Large quantities of timber have died, orchards have been destroyed and killed, crops have failed, and much grain, which escaped to reach maturity, rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and fruit-trees throughout considerable areas are utterly ruined. Many farms have been abandoned to wild lands or permitted forfeited to the State for non-payment of taxes. The destruction of timber, crops, orchards and gardens has been greater during the spring and summer of 1906 than during any previous spring and summer, and the territory subject to such destruction much larger than ever before.

Under existing conditions farming throughout said section will soon be a thing of the past, as no farm can be successfully conducted under same. In addition, the complete and utter

destruction of timber and orchards is near at hand, for, should the injury to and death of timber in the future progress as it has each year since the appearance of said fumes and vapors, but a short time will be required to complete the destruction which is already wide-spread.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
T. J. Ledford	Farmer	26	Toccoa.
B. L. Prints	Physician	14	Morganton.
T. H. Stephens	Mail carrier	21	Noontootla.
I. D. Falls	Farmer	70	Toccoa.
A. P. Johnson	Merchant	32	"
W. J. Ballew	"	10	Morganton.
John B. Green	Lumberman	31	Toccoa.
M. J. Jones	Farmer	29	"
W. B. Lovingood	Farmer & Shr'ff.	41	"
W. H. Genson	Farming	34	"
A. Beauer	Farmer	6	Morganton.
J. M. Johnson	Merchandise	3	"
W. G. Richards	Farmer	54	Hemptown.
I. C. Standridge	"	3	Morganton.
A. L. Standridge	"	3	"
R. L. Meadors	L. C.	38	"
W. S. Abercrombie	Farmer	35	"
Rev. R. B. Clemant	"	3	"
J. M. Carter	"	14	"
N. W. Freeman	"	41	"
Z. T. Green	"	2	"
W. T. Gulledge	"	10	"
S. D. Smith	"	3	"
F. J. Wilson	"	50	"
A. H. Morris	"	56	Hemptown.
I. L. Trammell	"	57	Blue Ridge.
J. H. Crawford	"	40	"
W. H. Deaver	"	32	Noontootla.
J. A. Freeman	"	3	Morganton.
T. G. Legg	"	38	"
J. M. Cook	"	40	Hemptown.
W. B. Richards	"	38	"
G. W. Wright	"	25	

Sworn to and subscribed before me, this 5th day of September, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned, who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, and mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color, and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and said smoke and fumes present in much greater volume and strength than theretofore observed. In addition where previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day or night.

These fumes and vapors have not appeared with equal frequency or volume in all parts of the county of deponent's residence, the same apparently being governed, in a measure, by the topography of the country. Prior to the past few months the appearance of the fumes was largely confined to valley lands, adjacent to, or radiating from, the Ducktown basin, or streams emptying therein, or lands unprotected by hilly or mountainous or other character of barriers. During the spring and summer of 1906, however, the fumes appear to have had greater carrying power, have reached higher altitudes, gone further, and passed barriers which theretofore protected localities previously immune therefrom. The fumes have not only appeared in localities theretofore exempt from same, and at greater distance from the plants of said copper companies, but said fumes were at times present in said localities in greater strength and volume than theretofore noticed by deponent in

localities much nearer to defendants' plant. In sections where said smoke and fumes had theretofore been noticeable, said smoke and fumes would at times be present in greater strength and density than was customary when the fumes theretofore put in their appearance.

Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year were raised throughout said section, the winter-growing crops consisting largely of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and like winter-growing vegetables. The farms, prior to the appearance of the fumes and vapors mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia in which deponent resides, are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white and chestnut oak, and other varieties, the white pine, spruce, yellow pine, hemlock and other conifers or trees of the evergreen variety being in leaf throughout the winter. Since the appearance of said fumes conditions of forests, orchards and farms have changed. Large quantities of timber have died, orchards have been destroyed and killed, crops have failed, and much grain, which escaped to reach maturity, rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and fruit-trees throughout considerable areas are utterly ruined. Many farms have been abandoned to wild lands or permitted forfeited to the State for non-payment of taxes. The destruction of timber, crops, orchards and gardens has been greater during the spring and summer of 1906 than during any previous spring and summer, and the territory subject to such destruction much larger than ever before.

Under existing conditions farming throughout said section will soon be a thing of the past, as no farm can be successfully conducted under same. In addition, the complete and utter destruction of timber and orchards is near at hand, for, should the injury to and death of timber in the future progress as it has each year since the appearance of said fumes and vapors, but a short time will be required to complete the destruction which is already wide-spread.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
G. W. Bryan	Farmer	6	Hemp.
J. T Leguire	Merchant	16 months	Morganton.
A. H. Hughs	Farmer	18	Hemp.
H. D. Payne	Teacher	26	Hurst.
Bert Richards	Farmer	22	Hemp.
Poly Richards	"	27	"
Samuel Anthony	"	2	Morganton.
J. V. Beaver	"	20	"
J. E. Wright	"	18	"
D. Whitesides	"	2½	"
W. J. Hays	"	2	Hemp.
Jim Parker	"	20	"
Sidney Orten	"	60	"
J. B. Orten	"	24	"
W. J. Bivens	"	28	"
R. W. Nichols	Merchant	33	Hurst.
J. J. Wall.	Farmer	5	"
W. V. Daves	Teacher and Farmer	32	"
W. D. Crewse	Farmer	32	"
J. K. Crewse	"	25	"
W. L. Green	"	1	"
J. A. Moore	Merchant	60	"
A. J. Warren	Farmer	36	"
J. H. Nichols	"	37	"
Grant Crawford	"	39	"
J. T. Cochran	"	38	"
H. A. Winstead	"	6	"
R. R. Crawford	"	33	"

Sworn to and subscribed before me, this 10th day of September, 1906.

G. D. NIXON,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned, who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character

of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, and mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color, and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and said smoke and fumes present in much greater volume and strength than theretofore observed. In addition where previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day or night.

These fumes and vapors have not appeared with equal frequency or volume in all parts of the county of deponent's residence, the same apparently being governed, in a measure, by the topography of the country. Prior to the past few months the appearance of the fumes was largely confined to valley lands, adjacent to, or radiating from, the Ducktown basin, or streams emptying therein, or lands unprotected by hilly or mountainous or other character of barriers. During the spring and summer of 1906, however, the fumes appear to have had greater carrying power, have reached higher altitudes, gone further, and passed barriers which theretofore protected localities previously immune therefrom. The fumes have not only appeared in localities theretofore exempt from same, and at greater distance from the plants of said copper companies, but said fumes were at times present in said localities in greater strength and volume than theretofore noticed by deponent in localities much nearer to defendants' plant. In sections where

said smoke and fumes had theretofore been noticeable, said smoke and fumes would at times be present in greater strength and density than was customary when the fumes theretofore put in their appearance.

Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year were raised throughout said section, the winter-growing crops consisting largely of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and like winter-growing vegetables. The farms, prior to the appearance of the fumes and vapors mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia in which deponent resides, are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white and chestnut oak, and other varieties, the white pine, spruce, yellow pine, hemlock and other conifers or trees of the evergreen variety being in leaf throughout the winter. Since the appearance of said fumes conditions of forests, orchards and farms have changed. Large quantities of timber have died, orchards have been destroyed and killed, crops have failed, and much grain, which escaped to reach maturity, rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and fruit-trees throughout considerable areas are utterly ruined. Many farms have been abandoned to wild lands or permitted forfeited to the State for non-payment of taxes. The destruction of timber, crops, orchards and gardens has been greater during the spring and summer of 1906 than during any previous spring and summer, and the territory subject to such destruction much larger than ever before.

Under existing conditions farming throughout said section will soon be a thing of the past, as no farm can be successfully conducted under same. In addition, the complete and utter destruction of timber and orchards is near at hand, for, should the injury to and death of timber in the future progress as it has each year since the appearance of said fumes and vapors, but a short time will be required to complete the destruction which is already wide-spread.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
R. W. Woody	Farmer	30	Noontoola.
J. W. Davis	"	32	"
Homer A. Legg	Student	26	Morganton.
D. W. Wilson	Farmer	45	"
W. R. Cook	"	5	Sugar Creek.
J. F. Chastain	"	53	Toccoa.
B. L. Smith	Printer	32	"
J. D. Chastain	Farmer	45	Sugar Creek.
J. M. Kirby	"	26	Stock Hill.
J. S. Chastain	Sawmilling	45	Morganton.
G. C. Seabolt	Blacksmith	37	Toccoa.
D. M. Buchanan	Farmer	40	"
J. S. Buchanan	"	56	"
J. C. Powell	Rep. Fannin Co.	33	Morganton.
S. T. Davenport	Farmer	34	Noontoola.
C. O. Shell	"	51	Toccoa.
G. V. Cochran	Machine Agent	41	"
J. S. Guy	Farmer	40	Flint Hill.
A. E. Cox	"	55	Morganton.
J. W. Davenport		25	Toccoa.
T. T. Fain, M.D		40	Blue Ridge.
I. F. Smith	Farmer	60	Morganton.
J. H. Watkins	"	39	Gilmer county.
John B. Paym	Salesman	30	Toccoa.
L. A. Germon	Farmer	30	Morganton.
L. J. Germon	"	22	"
A. F. Bass	"	59	Sugar Creek.
Hayden Arp	Merchant	35	"
W. C. Balmy	"	19	Toccoa.
G W. McAfee	Restaurant	7	"
Wm. M. Wilson	Postmaster	18	"
W. A. Daves	Ordinary	49	Morganton.
Jno. A. Wilson	Ass't P. M	32	Toccoa.

Sworn to and subscribed before me, this 3d day of September, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically

identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist of vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and said smoke and fumes present in much greater volume and strength than theretofore observed. In addition, where previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day or night.

These fumes and vapors have not appeared with equal frequency or volume in all parts of the county of deponent's residence, the same apparently being governed, in a measure, by the topography of the country. Prior to the past few months the appearance of the fumes was largely confined to valley lands, adjacent to, or radiating from, the Ducktown basin, or streams emptying therein, or lands unprotected by hilly or mountainous or other character of barriers. During the spring and summer of 1906, however, the fumes appear to have had greater carrying power, have reached higher altitudes, gone further, and passed barriers which theretofore protected localities previously immune therefrom. The fumes have not only appeared in localities theretofore exempt from same, and at greater distance from the plants of said copper companies, but said fumes were at times present in said localities in greater strength and volume than theretofore noticed by deponent in

localities much nearer to defendants' plant. In sections where said smoke and fumes had theretofore been noticeable, said smoke and fumes would at times be present in greater strength and density than was customary when the fumes theretofore put in their appearance.

Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year were raised throughout said section, the winter-growing crops consisting largely of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and like winter-growing vegetables. The farms, prior to the appearance of the fumes and vapors mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia in which deponent resides, are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white and chestnut oak, and other varieties, the white pine, spruce, yellow pine, hemlock and other conifers of trees of the evergreen variety being in leaf throughout the winter. Since the appearance of said fumes conditions of forests, orchards and farms have changed. Large quantities of timber have died, orchards have been destroyed and killed, crops have failed, and much grain, which escaped to reach maturity, rotted in the husk. Some species of timber, such as hickory and chetnut oak, have been practically exterminated, and fruit-trees throughout considerable areas are utterly ruined. Many farms have been abandoned to wild lands or permitted forfeited to the State for non-payment of taxes. The destruction of timber, crops, orchards and gardens has been greater during the spring and summer of 1906 than during any previous spring and summer, and the territory subject to such destruction much larger than ever before.

Under existing conditions farming throughout said section will soon be a thing of the past, as no farm can be successfully conducted under same. In addition, the complete and utter destruction of timber and orchards is near at hand, for, should the injury to and death of timber in the future progress as it has each year since the appearance of said fumes and vapors, but a short time will be required to complete the destruction which is already widespread.

NAME	OCCUPATION	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
G. W. A. Lanning	Farmer	35	1130
Thomas Payne	"	37	"
G. N. Tanksley	"	26	"
J. L. Patterson	"	26	"
Robert M. Cole	"	14	"
Sarah Patterson	"	44	"
Wm. Godfrey	"	51	"
S. W. Dunn	"	30	"
J. L. Payne	"	28	"
George Patterson	"	34	"
Larange Cantrel	"	27	"
John Payne	"	20	"
Faney H. Thomas	"	34	"
John Patterson	"	71	"
J. J. Payne	"	30	"
Thomas Patterson	"	25	"
John Patterson	"	36	"
W. A. Deal	"	26	"
Simon Payne	"	21	"
J. H. Payne	"	23	"
Bondick Hall	"	40	"
J. S. Patterson	"	23	"
M. V. Pelfrey	"	19	"
J. M. Allen	"	24	"

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
E. J. McClure	Farmer	46	Toccoa.
Berton Weaver	"	60	"
W. F. Thomas	"	60	Colwell.
B. F. Kincaid		66	Toccoa.
G. W. Ross	"	62	Mineral Bluff.
B. F. Burk	"	55	Sugar Creek.
W. F. Stundley	U. S. Dept. Marshal	56	Noontoolla.
G. D. Bailey	Farmer	42	Sugar Creek.
G. D. Nixon	"	22	Morganton.
B. M. Tilly	"	55	Wilscot.
John A. Long	"	38	Rock Creek.
J. A. Jones	Stock buyer	10	Toccoa.
Jas. P. Ritchie, T. C.	Farmer	35	Caldwell.
James Cook	" and timberman	37	Hemptown.
John E. Cook	" " "	31	Hemptown.
T. N. Thomas	Blacksmith	54	Toccoa.

Sworn to and subscribed before me, this 18th day of September, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character

of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist of vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

Particularly has this been the case during the spring and summer of this year, while heretofore, viz.: prior to May, 1906, these fumes were rarely ever noticed in deponent's neighborhood except late at night or early in the morning, but since this time these fumes have been present at times all hours of the day or night whenever the wind was from the direction of defendants' mines. Their appearance, too, has been marked more frequently and the fumes have been present in far greater strength and density than ever observed before. While before the spring and summer above mentioned, the destruction to timber and vegetation seemed to be accomplished gradually, since May of this year the destruction wrought has been much more signal than ever before known. Whenever said fumes have been noticed in unusual strength and volume in each of deponent's neighborhoods immediately thereafter, viz., in the next three or four days the timber and vegetation that had been enveloped in said fumes and exposed thereto would immediately show the evil effects of the same. The leaves on the timber would turn brown, shrivel up and fall from the trees. The corn leaves would be burnt and shrivel. The leaves on the peas and beans would likewise be wilted, and even the ragweeds and other hardy plants would wilt and perish as if the whole section had been visited by a severe frost.

Since the above spring and summer the fumes seem to have been given an increased carrying power, and seemed to have

been condensed and concentrated and made far more deadly. They seem to have mounted higher altitude and been able to pass barriers of mountains and hills that hithertofore seemed to protect certain sections where no damage had heretofore appeared. Since the above time referred to these barriers have been passed and new sections have been blighted and devastated that have never before been visited. Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year have been raised throughout said section. The winter-growing crops consisting largely of wheat, rye, and small grain generally, and market or garden truck, of turnips, collards, mustards and greens and like winter-growing vegetables. The farms prior to the appearance of the fumes above mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia where deponent resides are exceedingly large and valuable. Among the species of trees found are white pine, yellow pine, hemlock, white and chestnut oak, and other varieties. The white pine, yellow pine, hemlock, and other conifers, or trees of the evergreen varieties being in leaf throughout the winter. Some species of timber in the forest, such as hickory and chestnut oak have been almost exterminated, and fruit trees throughout considerable areas are badly damaged. The destruction to timber, crops and orchards has been far greater during the spring and summer of 1906, and the territory showing destruction vastly widened and increased over anything ever before known. Each deponent knows of his own knowledge that since May of this year that the destruction to timber and vegetation has been multiplied many times over anything ever before experienced, and said destruction has been wrought and accomplished in much less time. Should the destruction of timber, orchards and crops continue in the future as it has since May of this year, the complete and utter destruction of all timber and orchards is near at hand, as the destruction is already widespread.

NAME.	NO. YEARS IN COUNTY.	OCCUPATION.	DIST.	SECT.
G. M. Bryan	25	Farmer	1242	61
N. A. Phillips	6	"	1242	61
J. N. Frasure	50		71	
G. S. Nelson	15	Timber Insp'r	10th & 1st	
R. A. Tanner	62	Farmer	1242	61
M. J. Gilreath	12	"	1242	61
B. L. Meers	22	"	1242	61
F. L. Scholt	12	"	124	61
Thos. Bridges	25	"	1242	61

Sworn to and subscribed before me, this 14th day of September, 1906.

H. T. BARTON, N. P. and J. P.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn, in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for the number of years set opposite his name, and is engaged in the business there specified.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor, which possesses a peculiar odor, and is foul and offensive.

Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of vegetation has been most marked during the spring and summer of 1906. In fact, the greatest injury to forests and vegetation has occurred within about the past six weeks. In many localities when the foliage seemed green and reasonably healthy in May, June, and even July, the leaves are now brown and seared, and frequently have wholly fallen from the trees and cover the ground as is usually the case in the late fall and early winter—after several frosts have fallen. These conditions are found in many localities previously immune from the injury.

The death of timber and vegetation has been much more speedily accomplished during the past few months than ever before. Formerly the timber injury seemed gradual, the leaves, after the presence of the fumes a few times, yellowing and later falling mainly from the tree-tops and upper branches of the timber. This summer, however, immediately after a single visit of the fumes in the unusual strength, noticeable for the first time this spring and summer, the leaves would look scalded and blistered, would turn brown, and often wholly fall from the trees. Other vegetation, crops, gardens, and even weeds, show similar effects. Much timber is now utterly denuded of leaves, and even the underbrush shows great damage.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
T. E. Dye	Farmer	23	Mineral Bluff.
W. G. Dye.	"	33	Hot House.
J. W. Dye	"	20	" "
S. White	"	15	Mineral Bluff.
O. M. Hendon	"	23	Hot House.
W. C. Bullen	"	25	Mineral Bluff.
E. L. Fortner	"	5	" "
G. de Vries	"	8	" "
G. M. Gibbs	"	39	" "
H. B. Hyde	"	23	Hot House.
Wm. Gartner	Merchant and Farmer.	13	Hemptown.
Enoch Hunter	Farmer.	49	Morganton.
Richard Worfolk	"	30	Hot House.
Osborn Williams	"	52	Morganton.
W. O. Williams	"	26	"
J. L. Gray	"	52	Fair Play.
T. C. Kendall	"	31	Morganton.
M. S. Beaver	"	26	"
W. A. Wilson	"	18	"
L. V. King	"	6	"
R. M. Wright	"	52	"
John Carter	"	13	"
Marion McNeely	"	30	Toccoa.
Riley Hicks	"	35	"
D. R. Payne	"	34	Flint Hill.
Buice Godfrey	"	52	Sugar Creek.
Wade Godfrey	"	27	" "

NAME	OCCUPATION	LENGTH OF RESIDENCE. YEARS.	DISTRICT
W. M. Allen	Merchant	35	Toccoa
C. P. Stuart	Electrician	21	"
J. B. McKiney	Lumberman	42	"
Edgar N. Bent	Optician	34	"
J. W. Hipp	Hotel	3	"
Jno. M. Jans	Railroading	12	"
J. J. Premit	Merchant	45	"
J. W. Brinkly	Carpenter	10	"
F. N. Cook	Merchant	34	"
G. E. L. Falls	Doctor	53	"
Jacob Weaver	Farmer	50	"
W. S. Bailey	"	40	Morganton
Willis Abercrumbia	"	33	"
T. K. Cook	"	16	Hempton
W. K. Vanhook	"	49	Fairplay
W. H. Famer	"	40	Mineral Bluff
S. T. Richards	"	53	Morganton
H. D. Cochran	"	25	Hempton
G. D. Teat	Ed. Newspaper	3	Toccoa
Bruce Mull	Farmer	39	Mineral Bluff
M. H. Gibbs	"	25	Hot House
J. M. Falls	"	48	Mineral Bluff
Thos. W. Buelew	"	53	Hot House
J. B. Adams	"	3	Mineral Bluff
Andrew White	"	12	" "
James C. Dilhard	"	35	Hot House
J. B. Dye	"	25	" "

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
Moses Payne	Farming	29	Morganton.
Burl Payne	"	18	"
John Warren	"	17	"
Dallas Payne	"	22	"
Andrew Bramlett	"	12	Skeniah.
Bud Rickets	"	19	"
E. L. Bramlett	"	50	"
Dee Tow	"	16	"
Silny Seabolt	"	17	"
J. A. Taffar	"	19	Upper Young Cane
James Taffar	"	17	" " "
James Thomas	"	22	Skeniah.
Green Walker	"	20	"
Jernis Walker	"	19	"
Joel Walker	"	18	"
Binum Walker	"	16	"
G. L Seaboldt	"	14	"
W. M. Taffar	"	14	Upper Young Cane
J. C. Bramlett	"	16	Skeniah.
J. S. Rhoads	"	17	Upper Young Cane
James Rhoads	"	10	Skeniah.
Joseph Danes	"	60	Morganton.
W. H. Fortner	"	5	Fair Play.
David Sheel	"	23	Blue Ridge.
T. J. Davis	"	9	Mineral Bluff.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
W. G. Thomas	Farmer	40	Sugar Creek.
G. W. McAfee	Merchant	7	Blue Ridge, Ga.
R. M. Wilson	Clerk	24	"
W. G. Owenby	Wholesale Gr.	8	"
J. R. McKinney	P. M. & Merchant	25	Coldwell.
John Owenby	Cleark	35	Mineral Bluff.
V. A. Trammell	Merchant & Timberman	35	Blue Ridge.
C. I. Reynolds	Farmer	49	Morganton.
F. G. Dunlon	Hard. Merchant	5	Blue Ridge.
A. S. J. Hall	Attorney at Law	16	"
W. O. Davenport	Merchant	33	Hemptown.
G. A. Rhodes	Farmer	25	Mineral Bluff.
R. F. Smith	Teleg'ph operator	1	"
Robt. Hampton	Clerk	7	"
W. Y. Gilnom	Physician	28	"
T. G. Hall	Farmer	39	Blue Ridge.
J. M. Daves	M. D.	45	"
H. P. Mulkey	Cash. No. Ga. Trust Co.	10	"
W. A. Anderson	Sewing Mach. Agt.	8	"
J. A. Jones	Sheep Dealer	8	"
H. C. Thomas	Farmer	25	Shugar Creek.
J. H. Young	"	26	"
J. D. Young	"	45	"
J. B. Garrett	D. D. S.	20	Morganton.
W. C. Boling	Merchant	19	Toccoa.
J. A. Green	Farmer	50	"
Thos. Couther		50	"

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
W. L. G. Odom	Farmer	20	Sugar Creek.
Giles Green	"	52	" "
J. A. Odom	"	20	" "
W. A. Odom	"	20	" "
M. D. Stuart	"	27	" "
Wm. M. Cox	"	46	" "
S. H. Crawford	"	46	" "

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
J. Y. Allen	Farmer	10	Toccoa.
M. L. Conley	"	28	"
E. S. Beever	"	27	Noontootla.
Sam Young	"	50	Sugar Creek.
A. L. Morten	"	12	"
W. D. Cock	City Marshal	35	Toccoa.
T. P. Bryant	Farmer	52	"
M. B. Williamson	"	52	Coldwell.
A. L. Jane	Shoemaker	10	Toccoa.
R. C. Arp	Farmer	52	Sugar Creek.
J. L. Stuart	"	30	Toccoa.
Dave Dickey	"	40	Morganton.
J. W. Thomas	"	52	Toccoa.
F. M. Galloring	"	28	"
J. W. Bryant	"	39	"
J. S. Bryant	"	36	"
Wm. Brinkle	"	15	"
W. D. Smith	"	62	Morganton.
T. T. Farr	M. D		
B. F. Weeks	Farmer	40	Coldwell.
John Vestel	" & L'vr'n.	44	Toccoa.
B. F. Davenport	"	50	"
J. E. Cochran	"	45	Sugar Creek.
Henry Davenport	"	47	Toccoa.
J. R. Chastain	"	50	Morganton.
W. L. Rogers	"	37	"
D. O. Denis	"	16	"
J. W. Weston	"	50	Near Cherry Log
John B. Tipton	"	40	Toccoa.

Sworn to and subscribed before me, this 15th day of September, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn, in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for the number of years set opposite his name, and is engaged in the business there specified.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor, which possesses a peculiar odor, and is foul and offensive.

Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of vegetation has been most marked during

the spring and summer of 1906. In fact, the greatest injury to forests and vegetation has occurred within about the past six weeks. In many localities when the foliage seemed green and reasonably healthy in May, June, and even July, the leaves are now brown and seared, and frequently have wholly fallen from the trees and cover the ground as is usually the case in the late fall and early winter—after several frosts have fallen. These conditions are found in many localities previously immune from the injury.

The death of timber and vegetation has been much more speedily accomplished during the past few months than ever before. Formerly the timber injury seemed gradual, the leaves, after the presence of the fumes a few times, yellowing and later falling mainly from the tree-tops and upper branches of the timber. This summer, however, immediately after a single visit of the fumes in the unusual strength, noticeable for the first time this spring and summer, the leaves would look scalded and blistered, would turn brown, and often wholly fall from the trees. Other vegetation, crops, gardens, and even weeds, show similar effects. Much timber is now utterly denuded of leaves, and even the underbrush shows great damage.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
M. J. Clontz	Farmer	30	Morganton.
W. G. Richards	"	40	"
J. J. Cordell	"	40	Mineral Bluff.
L. C. Allen	"	54	Morganton.
N. J. Addington	"	40	"

Sworn to and subscribed before me, this 18th day of September, 1906.

G. D. NIXON,
J. P. and Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn, in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for the number of years set opposite his name, and is engaged in the business there specified.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor, which possesses a peculiar odor, and is foul and offensive.

Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of vegetation has been most marked during the spring and summer of 1906. In fact, the greatest injury to forests and vegetation has occurred within about the past six weeks. In many localities when the foliage seemed green and reasonably healthy in May, June, and even July, the leaves are now brown and seared, and frequently have wholly fallen from the trees and cover the ground as is usually the case in the late fall and early winter—after several frosts have fallen. These conditions are found in many localities previously immune from the injury.

The death of timber and vegetation has been much more speedily accomplished during the past few months than ever before. Formerly the timber injury seemed gradual, the leaves, after the presence of the fumes a few times, yellowing and later falling mainly from the tree-tops and upper branches of the timber. This summer, however, immediately after a single visit of the fumes in the unusual strength, noticeable for the first time this spring and summer, the leaves would look scalded and blistered, would turn brown, and often wholly fall from the trees. Other vegetation, crops, gardens, and even weeds, show similar effects. Much timber is now utterly denuded of leaves, and even the underbrush shows great damage.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
C. Y. Dillingham	Farmer	23	Hemp.
W. M. Ledbetter	"	26	"
W. P. Odom	"	21	"
R. L. Weam	"	35	"
B. J. Roberts	"	46	"
his J. P. + Pope mark.	"	4	"
D. Y. Nichols	"	25	"
J. W. Mashburn	"	27	"
W. S. Mashburn	"	40	"

Sworn to and subscribed before me, this 17th day of September, 1906.

JAS. A. BRUCE, J. P.
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn, in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for the number of year set opposite his name, and is engaged in the business there specified.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defe[illegible]ants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor, which possesses a peculiar odor, and is foul and offensive.

Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak , have been practically exterminated.

The destruction of vegetation has been most marked during the spring and summer of 1906. In fact, the greatest injury to forests and vegetation has occurred within about the past

six weeks. In many localities when the foliage seemed green and reasonably healthy in May, June and even July, the leaves are now brown and seared, and frequently have wholly fallen from the trees and cover the ground as is usually the case in the late fall and early winter—after several frosts have fallen. These conditions are found in many localities previously immune from the injury.

The death of timber and vegetation has been much more speedily accomplished during the past few months than ever before. Formerly the timber injury seemed gradual, the leaves, after the presence of the fumes a few times, yellowing and later falling mainly from the tree-tops and upper branches of the timber. This summer, however, immediately after a single visit of the fumes in the unusual strength, noticeable for the first time this spring and summer, the leaves would look scalded and blistered, would turn brown, and often wholly fall from the trees. Other vegetation, crops, gardens, and even weeds, show similar effects. Much timber is now utterly denuded of leaves, and even the underbrush shows great damage.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
J. H. Sisson	Farmer	33	Toccoa
O. P. Sisson	"	30	"
J. M. Sisson	"	25	"
Jas. Bruce	"	45	Hemptown
J. L. Farmer	"	50	Morgan
F. E. Aaron	"	20	Morganton
E. H. Kindall	"	17	Noontootla
Larkin Gesman	"	69	Morganton
G. W. Tarpley	"	43	"
Fidela Weaver	"	63	Toccoa
W. J. Ballew	"	10	Morganton
E. W. Grizzel	"	15	"
J. M. Hackney	"	10	Toccoa
J. G. Allen	"	54	Skeniah
G. L. Godfrey	"	48	Sugar Creek
J. P. Murphy	"	3	Toccoa
M. P. Strogan	"	25	"
R. T. Stiles	Merchant	4	"
J. W. Burty	Farmer	15	"
H. F. Kincaid	"	19	"
J. A. Cornett	"	31	"
G. A. Curtis	"	28	Sugar Creek
W. M. Bailey	"	51	Mabert
C. L. McClure	"	30	Toccoa
L. G. Green	"	22	"
J. A. Martin	"	5	Morganton

Sworn to and subscribed before me, this 18th day of September, 1906.

J. R. CHASTAIN,
U. S. Commissioner Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn, in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for the number of year set opposite his name, and is engaged in the business there specified.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor, which possesses a peculiar odor, and is foul and offensive.

Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak , have been practically exterminated.

The destruction of vegetation has been most marked during

the spring and summer of 1906. In fact, the greatest injury to forests and vegetation has occurred within about the past six weeks. In many localities when the foliage seemed green and reasonably healthy in May, June and even July, the leaves are now brown and seared, and frequently have wholly fallen from the trees and cover the ground as is usually the case in the late fall and early winter—after several frosts have fallen. These conditions are found in many localities previously immune from the injury.

The death of timber and vegetation has been much more speedily accomplished during the past few months than ever before. Formerly the timber injury seemed gradual, the leaves, after the presence of the fumes a few times, yellowing and later falling mainly from the tree-tops and upper branches of the timber. This summer, however, immediately after a single visit of the fumes in the unusual strength, noticeable for the first time this spring and summer, the leaves would look scalded and blistered, would turn brown, and often wholly fall from the trees. Other vegetation, crops, gardens, and even weeds, show similar effects. Much timber is now utterly denuded of leaves, and even the underbrush shows great damage.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
Samuel Higdon	Farming	30	Caldwell.
W. T. Higdon	"	38	"
Mary Hice	"	31	"

Sworn to and subscribed before me, this 19th day of September, 1906.

M. B. WILLIAMSON,
J. P. and Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for forty years, deponent's residence being in the..... district of said county. Deponent is engaged in the business of farmer, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enter-

prise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occa- three years been a matter of repeated occurrence. This vapor sionally occurs during the year. It has within the past two or has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been aban-

doned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponents' observation: That deponents live in the Morganton district of said county; that deponents have suffered great loss to valuable timber, which they have not allowed to be cut. Now it is dying, so as to cause great loss. Deponents had a heap of peaches and apples which is about a total loss. The trees are dying and will be a great loss; also beans, cabbage and all vegetables is either lost or in a decaying condition. The whole vegetable and cereal crop is so badly hurt this year that it looks like the farmers and timber-owners will be ruined if things go on the way they are now.

GEORGE N. ORTON,
HANSOM ORTON.

Sworn to and subscribed before me, this 15th day of September, 1906.

B. M. TILLEY,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1905

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for thirty-one years, deponent's residence being in the 113th district of said county. Deponent is engaged in the business of farming and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge

of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have

been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation was June 26, 27 and 28, 1906, and has at various times since been noticeable, and done damage, and on September 5, 1906, it killed bean vines and other vegetation on deponent's farm.

W. H. Dunn.

Sworn to and subscribed before me, this 18th day of September, 1906.

Thos. A. Brown,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for thirty-three years, deponent's residence being in the Hemptown district of said county. Deponent is engaged in the business of merchandise, etc., and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have

been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows:

Deponent is a merchant at Hemp, Fannin county, Georgia, located about twenty miles from defendants' furnaces. At different times during July and August, 1906, the smoke and fumes from said furnaces located at McCay and Isabella, Tennessee, came down on the premises of deponent, and on the watermelon, cucumber, tomato vines and roses growing on said premises in great volume and strength, and by the days following each visitation the same were scorched and blistered as though bitten by frost. The fodder on the growing corn was affected as follows: The blades have rotted to the stem. Since the erection of the high stack by The Tennessee Copper Company the damage done by the smoke and fumes from said furnaces in deponent's neighborhood has been much greater than ever before.

W. O. Davenport.

Sworn to and subscribed before me, this 14th day of September, 1906.

Thos. A. Brown,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for fifty-two years, deponent's residence being in the Sugar Creek district of said county. Deponent is engaged in the business of farming, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge

any of deponents, any mercantile or manufacturing enterse or natural condition of affairs which ever has, does, or ild produce either such haze, vapor, or odor. Deponent has served this vapor whenever the wind was from defendants' nes. This vapor is dense in character and has a tendency settle toward the earth, and especially when the air is dense heavy with moisture. The odor, color and cohesiveness of mist or haze is greater upon such occasions than when the is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasnally occurs during the year. It has within the past two or ree years been a matter of repeated occurrence. This vapor s been generally noticed by the citizens and residents, and s caused extensive comment.

This has been particularly the case during the past spring d summer of 1906. The smoke has been noticeable much ore frequently than theretofore, and was present in greater lume and strength than theretofore observed. In addition, hile previously the smoke and fumes were usually apparent ly late in the afternoon, at night and in the early morning, ring the last few months the fumes and vapors were at times esent during all hours of the day and night.

Much of the county in which deponent resides is devoted to gricultural purposes, and heretofore, two crops per year roughout said section were harvested, the winter-growing arm crops consisting mainly of wheat, rye, barley and small rain generally, and the market or garden truck of turnips, colrds, mustard and the like. The farms, prior to the appearnce of the fumes and vapors before mentioned were, as a rule, rofitable, and were cultivated from year to year, and were enerally in a good condition.

The timber interests in the section of Georgia in which deonent is located are exceedingly large and valuable. Among he species of trees found are white pine, spruce, yellow pine, emlock, white oak, chestnut oak, chestnut, hickory and other arieties, the white pine, spruce, yellow pine and hemlock being n leaf through the winter.

Since the appearance of said fumes the conditions of the orhards, forests and farms have changed. Large quantities of imber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been aban-

doned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows:

Deponent owns a farm, which he cultivates, in said county and district, about seven miles from the furnaces of the said defendants. At various times during the spring and summer of 1906, the smoke and fumes from said furnaces, in unusual volume and strength, were observed to come down on and envelop the said farm and timber and crops growing thereon. When the same had been lifted and blown away by the winds deponent noticed very soon thereafter that the bean, pea and tomato vines and the tops of Irish potatoes had been scorched and blistered. They turned white and died as when frostbitten. The leaves on deponent's apple and peach trees were likewise affected. The leaves fell off and left the limbs bare. The fruit soon became dwarfed and fell off. The timber and all crops and vegetation has been injured in the same manner. The damage done to all kinds of vegetation in his neighborhood, and farther away from the furnaces of defendants, have been much more affected by said fumes than during any previous year. The erection of the high stack by the defendant, The Tennessee Copper Company, has increased the carrying power of said fumes, and while it has to some extent relieved the situation in and around the immediate vicinity of said furnaces, it has very much aggravated the condition of things for many miles farther away, which has produced great damage to timber and the destruction of crops in territory not heretofore injuriously affected.

BAILEY GODFREY.

Sworn to and subscribed before me, this 18th day of September, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for fifty-two years, deponent's residence being in the Morganton district of said county. Deponent is engaged in the business of farming and market gardening, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of t[illegible]er, such as hickory and chestnut

oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows:

Deponent is the joint owner with his brother, Joseph Wilson, of a farm located in said district and county, one mile north of the town of Morganton, and about thirteen miles southeast of defendants' furnaces. Deponent and his said brother, for more than twenty years, have been raising watermelons in large quantities for sale, and for the last five years have been cultivating market garden truck on their said farm. They conducted their said business of raising watermelons and market gardening with considerable profit until within the last two or three years just passed. Some three years ago the smoke and fumes from defendants' said furnaces began to make their appearance on said farm, and more or less injuring their crops. Since the erection of the high stack or chimney by The Tennessee Copper Company at McCay, Tennessee, the smoke and fumes from said furnaces have bee nmuch more noticeable, and in very much greater strength and volume than during any previous year, and the damage done to their crops on said farm has been very largely increased. At various times since the erection of said stack this past spring and during the summer of 1906 these fumes have come down on their said watermelons and growing market truck, and soon after it lifted the melon vines, tomato vines and bean vines and other growing vegetables were scorched and blistered and presented the appearance of having been frostbitten. The watermelon vines were entirely destroyed, and the crop this year was a total failure. The tomatoes were retarded in growth, the fruit was small and dwarfed and almost unfit for market at any price. If the smoke and fumes from defendants' furnaces are allowed

to continue to blow over upon and to envelop deponent's farm and vegetation as during the past spring and summer, it will become impossible to grow market truck for sale, or even home use, and deponent and his said brother will be compelled to abandon their market garden business.

T. J. WILSON.

Sworn to and subscribed before me, this 19th day of September, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for ten years, deponent's residence being in the Sugar Creek district of said county. Deponent is engaged in the business of Farmer and is a property-holder in said county.

Deponent is familiar with farming conditions, timber inter-

ests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as

a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for nonpayment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation: June 20-25, during which time said smoke was abundantly present, and after same lifted all garden vegetables, including beans, peas, cabbage and the like, was utterly destroyed. In addition, deponent's fruit was ruined. Said smoke has enveloped deponent's farm on other occasions, but the damage was greatest at said time, probably for the reason that practically all garden truck was killed at the time hereinbefore specified.

JOS. CARROLL.

Sworn to and subscribed before me, this 28th day of August, 1906.

J. R. CHASTAIN
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for forty years, deponent's residence being in the Fallard district of said county. Deponent is engaged in the business of Farmer and is a property holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enter-

prise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for nonpayment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation: About June 29th the smoke appeared in great volume and strength, and immediately thereafter deponent's garden vegetables shriveled and died. His beans, potatoes, tomatoes and other vegetables were utterly ruined. Fruit was destroyed and even the grass in deponent's meadow was ruined. The smoke has appeared other times, but the greatest damage was apparent after it lifted, June 29th.

CHAS. R. PARKS.

Sworn to and subscribed before me, this 28th day of August, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for twelve years, deponent's residence being in the Morganton district of said county. Deponent is engaged in the business of Farmer and is a property holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge

of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have

been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation: June 23, 1906, when the smoke appeared in great strength, and immediately thereafter the beans, tomatoes, potatoes, watermelons and peas shriveled and died.

On August 11th the smoke again came down in heavy volume, enveloping deponent's place, killing deponent's tomatoes, which had been replanted, ruining his corn and utterly ruining his orchard. Not only was his fruit crop completely killed, but his fruit trees were almost totally destroyed.

The smoke has come down on other occasions, but was strongest on said date.

D. O. DAVIS.

Sworn to and subscribed before me, this 28th day of August, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physic-

ally identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, and mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color, and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and said smoke and fumes present in much greater volume and strength than theretofore observed. In addition where previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day or night.

These fumes and vapors have not appeared with equal frequency or volume in all parts of the county of deponent's residence, the same apparently being governed, in a measure, by the topography of the country. Prior to the past few months the appearance of the fumes was largely confined to valley lands, adjacent to, or radiating from, the Ducktown basin, or streams emptying therein, or lands unprotected by hilly or mountainous or other character of barriers. During the spring and summer of 1906, however, the fumes appear to have had greater carrying power, have reached higher altitudes, gone further, and passed barriers which theretofore protected localities previously immune therefrom. The fumes have not only appeared in localities theretofore exempt from same, and at greater distance from the plants of said copper companies, but said fumes were at times present in said localities in greater strength and volume than theretofore noticed by deponent in localities much nearer to defendants' plant. In

sections where said smoke and fumes had theretofore been noticeable, said smoke and fumes would at times be present in greater strength and density than was customary when the fumes theretofore put in their appearance.

Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year were raised throughout said section, the winter-growing crops consisting largely of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and like winter-growing vegetables. The farms, prior to the appearance of the fumes and vapors mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia in which deponent resides, are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white and chestnut oak, and other varieties, the white pine, spruce, yellow pine, hemlock and other conifers or trees of the evergreen variety being in leaf throughout the winter. Since the appearance of said fumes conditions of forests, orchards and farms have changed. Large quantities of timber have died, orchards have been destroyed and killed, crops have failed, and much grain, which escaped to reach maturity, rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and fruit-trees throughout considerable areas are utterly ruined. Many farms have been abandoned to wild lands or permitted forfeited to the State for non-payment of taxes. The destruction of timber, crops, orchards and gardens has been greater during the spring and summer of 1906 than during any previous spring and summer, and the territory subject to such destruction much larger than ever before.

Under existing conditions farming throughout said section will soon be a thing of the past, as no farm can be successfully conducted under same. In addition, the complete and utter destruction of timber and orchards is near at hand, for, should the injury to and death of timber in the future progress as it has each year since the appearance of said fumes and vapors, but a short time will be required to complete the destruction which is already wide-spread.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE YEARS.	DISTRICT.
W. B. Cole	Farmer	50	50
J. W. Cole	"	42	42
D. M. Fisher	"	25	25

Sworn to and subscribed before me, this 10th day of September, 1906.

JOHN F. McNELLY,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, and mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color, and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and said smoke and fumes present in much greater volume and strength than theretofore observed. In addition where previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day or night.

These fumes and vapors have not appeared with equal frequency or volume in all parts of the county of deponent's residence, the same apparently being governed, in a measure, by

the topography of the country. Prior to the past few months the appearance of the fumes was largely confined to valley lands, adjacent to, or radiating from, the Ducktown basin, or streams emptying therein, or lands unprotected by hilly or mountainous or other character of barriers. During the spring and summer of 1906, however, the fumes appear to have had greater carrying power, have reached higher altitudes, gone further, and passed barriers which theretofore protected localities previously immune therefrom. The fumes have not only appeared in localities theretofore exempt from same, and at greater distance from the plants of said copper companies, but said fumes were at times present in said localities in greater strength and volume than theretofore noticed by deponent in localities much nearer to defendants' plant. In sections where said smoke and fumes had theretofore been noticeable, said smoke and fumes would at times be present in greater strength and density than was customary when the fumes theretofore put in their appearance.

Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year were raised throughout said section, the winter-growing crops consisting largely of wheat, rye, and small grain generally, and the market or garden truck of turnips, collards, mustard and like winter-growing vegetables. The farms, prior to the appearance of the fumes and vapors mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia in which deponent resides, are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white and chestnut oak, and other varieties, the white pine, spruce, yellow pine, hemlock and other conifers or trees of the evergreen variety being in leaf throughout the winter. Since the appearance of said fumes conditions of forests, orchards and farms have changed. Large quantities of timber have died, orchards have been destroyed and killed, crops have failed, and much grain, which escaped to reach maturity, rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and fruit-trees throughout considerable areas are utterly ruined. Many farms have been abandoned to wild lands or permitted forfeited to the State for non-payment of taxes. The destruction of timber, crops, orchards and gardens has been greater during

the spring and summer of 1906 than during any previous spring and summer, and the territory subject to such destruction much larger than ever before.

Under existing conditions farming throughout said section will soon be a thing of the past, as no farm can be successfully conducted under same. In addition, the complete and utter destruction of timber and orchards is near at hand, for, should the injury to and death of timber in the future progress as it has each year since the appearance of said fumes and vapors, but a short time will be required to complete the destruction which is already wide-spread.

Greater damage has been wrought to farms and lands, to timber, orchards, crops and gardens during the past spring and summer (1906) than was accomplished in any three years previous; in fact, more damage per month was apparent for the months of June, July and August, 1906, than was noticeable per year prior to the present time. The injury has also increased each month, that in August being in excess of July, and July greater than June, 1906.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE, YEARS.	DISTRICT.
John E. Davis	Farmer	50	Toccoa.
C. D. Davenport	"	30	"
C. J Trammell	Sawmill man	40	"
L. S. Sluder	Farmer	60	"
G. W. Aaron	"	50	Morganton.
L. C. Smith	"	5	"
W. E. Rogers	"	52	Hot House.
John W. Anderson	"	62	" "
A. B. Dickey	"	40	Toccoa.
S. H. Green	"	50	"
Stephen Griffin	"	35	"
J. Y. Curtis	"	36	"
R. L. Phillips	"	28	"
J. H. Griffin	"	27	"
F. E. Green	"	45	"
Thomas A Brown	Attorney		

Sworn to and subscribed before me, this 28th day of August, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character

of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, and mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color, and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and said smoke and fumes present in much greater volume and strength than theretofore observed. In addition where previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day or night.

These fumes and vapors have not appeared with equal frequency or volume in all parts of the county of deponent's residence, the same apparently being governed, in a measure, by the topography of the country. Prior to the past few months the appearance of the fumes was largely confined to valley lands, adjacent to, or radiating from, the Ducktown basin, or streams emptying therein, or lands unprotected by hilly or mountainous or other character of barriers. During the spring and summer of 1906, however, the fumes appear to have had greater carrying power, have reached higher altitudes, gone further, and passed barriers which theretofore protected localities previously immune therefrom. The fumes have not only appeared in localities theretofore exempt from same, and at greater distance from the plants of said copper companies, but said fumes were at times present in said localities in greater strength and volume than theretofore noticed

by deponent in localities much nearer to defendants' plant. In sections where said smoke and fumes had theretofore been noticeable, said smoke and fumes would at times be present in greater strength and density than was customary when the fumes theretofore put in their appearance.

Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year were raised throughout said section, the winter-growing crops consisting largely of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and like winter-growing vegetables. The farms, prior to the appearance of the fumes and vapors mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia in which deponent resides, are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white and chestnut oak, and other varieties, the white pine, spruce, yellow pine, hemlock and other conifers or trees of the evergreen variety being in leaf throughout the winter. Since the appearance of said fumes conditions of forests, orchards and farms have changed. Large quantities of timber have died, orchards have been destroyed and killed, crops have failed, and much grain, which escaped to reach maturity, rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and fruit-trees throughout considerable areas are utterly ruined. Many farms have been abandoned to wild lands or permitted forfeited to the State for non-payment of taxes. The destruction of timber, crops, orchards and gardens has been greater during the spring and summer of 1906 than during any previous spring and summer, and the territory subject to such destruction much larger than ever before.

Under existing conditions farming throughout said section will soon be a thing of the past, as no farm can be successfully conducted under same. In addition, the complete and utter destruction of timber and orchards is near at hand, for, should the injury to and death of timber in the future progress as it has each year since the appearance of said fumes and vapors, but a short time will be required to complete the destruction which is already wide-spread.

The injury during the months of June, July and August has been enormous. In many localities as much injury has

been done within the past few months as was previously noticed during the entire time of defendants' operations.

In some localities previously protected by mountain barriers, or otherwise shielded from the fumes, as much damage has been experienced during the present spring and summer as was felt in unprotected communities during the whole time of defendants' operations.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE YEARS.	DISTRICT.
A. J. Dillard	Farmer	38	Hot House.
J. M. Bulk	"	7	" "
H. G. Coler	"	25	" "
W. K. Dillard	"	49	" "
J. P. Henson	"	16	" "
N. A. Carter	"		Cherokee Co. N. C.
E. L. Carter	"		" " "
T. R. Carter	"		" " "
A. E. Clour	"		" " "
E. B. Carter	"		" " "
Frank Baudy	"		" " "
Martin Tetherow	"		" " "
W. H. White	"	20	Hot House.

Sworn to and subscribed before me, this 19th day of September, 1906.

FRED FORRESTER,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character

of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, and mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color, and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and said smoke and fumes present in much greater volume and strength than theretofore observed. In addition where previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day or night.

These fumes and vapors have not appeared with equal frequency or volume in all parts of the county of deponent's residence, the same apparently being governed, in a measure, by the topography of the country. Prior to the past few months the appearance of the fumes was largely confined to valley lands, adjacent to, or radiating from, the Ducktown basin, or streams emptying therein, or lands unprotected by hilly or mountainous or other character of barriers. During the spring and summer of 1906, however, the fumes appear to have had greater carrying power, have reached higher altitudes, gone further, and passed barriers which theretofore protected localities previously immune therefrom. The fumes have not only appeared in localities theretofore exempt from same, and at greater distance from the plants of said copper companies, but said fumes were at times present in said localities in greater strength and volume than theretofore noticed

by deponent in localities much nearer to defendants' plant. In sections where said smoke and fumes had theretofore been noticeable, said smoke and fumes would at times be present in greater strength and density than was customary when the fumes theretofore put in their appearance.

Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year were raised throughout said section, the winter-growing crops consisting largely of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and like winter-growing vegetables. The farms, prior to the appearance of the fumes and vapors mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia in which deponent resides, are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white and chestnut oak, and other varieties, the white pine, spruce, yellow pine, hemlock and other conifers or trees of the evergreen variety being in leaf throughout the winter. Since the appearance of said fumes conditions of forests, orchards and farms have changed. Large quantities of timber have died, orchards have been destroyed and killed, crops have failed, and much grain, which escaped to reach maturity, rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and fruit-trees throughout considerable areas are utterly ruined. Many farms have been abandoned to wild lands or permitted forfeited to the State for non-payment of taxes. The destruction of timber, crops, orchards and gardens has been greater during the spring and summer of 1906 than during any previous spring and summer, and the territory subject to such destruction much larger than ever before.

Under existing conditions farming throughout said section will soon be a thing of the past, as no farm can be successfully conducted under same. In addition, the complete and utter destruction of timber and orchards is near at hand, for, should the injury to and death of timber in the future progress as it has each year since the appearance of said fumes and vapors, but a short time will be required to complete the destruction which is already wide-spread.

Greater damage has been wrought to farms and lands, to timber, orchards, crops and gardens during the past spring

and summer (1906) than was accomplished in any three years previous; in fact, more damage per month was apparent for the months of June, July and August, of 1906, than was noticeable per year prior to this time. The injury is also increasing each month, that in August being in excess of July, and July greater than June, 1906.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
J. R. Chastain	Farmer	50	Morganton.
R. C. Miller	"	4	Toccoa.
M. F. Davenport	"	57	"
W. E. C. Curtis	"	45	Sugar Creek.
Jos. Carroll	"	10	"
W. S. Watkin	"	45	Toccoa.
J. F. Lechford	"	39	"
Wm. Robinson	"	45	"
A. J. Warren	"	35	Morganton.
J. D. Land	"	45	Toccoa.
D. O. Davis	"	12	Morganton.
J. J. Carter	"	40	"
W. S. Watkins, Jr	"	37	"
R. N. Cook	"	19	"
J. E. Findley	Dept. Sheriff	47	Toccoa.
John Miller	Farmer	11	"
J. H. Davis	"	40	"
William Butt	Attorney	25	"
D. R. Ballew	Farmer	10	Sugar Creek.
A. L. Jones	"	29	Toccoa.
Jacob Weaver	"	70	"
J. M. C. Potts	"	53	Colwell.
J. W. Watkin	"	30	"
W. A. Miller	"	27	"
J. M. Hall	"	50	Toccoa.
Giles Green	"	53	"
J. Y. Allen	"	10	"
J. C. Cook	"	19	Morganton.
W. A. Wilson	J. P.	46	Tallad.
C. R. Parks	Farmer	40	40
John Merrell	"	55	54
E. D. Patton	"	45	45
W. B. Legg	"	50	50

Sworn to and subscribed before me, this 28th day of August, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character

of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, and mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color, and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and said smoke and fumes present in much greater volume and strength than theretofore observed. In addition where previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day or night.

These fumes and vapors have not appeared with equal frequency or volume in all parts of the county of deponent's residence, the same apparently being governed, in a measure, by the topography of the country. Prior to the past few months the appearance of the fumes was largely confined to valley lands, adjacent to, or radiating from, the Ducktown basin, or streams emptying therein, or lands unprotected by hilly or mountainous or other character of barriers. During the spring and summer of 1906, however, the fumes appear to have had greater carrying power, have reached higher altitudes, gone further, and passed barriers which theretofore protected localities previously immune therefrom. The fumes have not only appeared in localities theretofore exempt from same, and at greater distance from the plants of said copper companies, but said fumes were at times present in said localities in greater strength and volume than theretofore noticed

by deponent in localities much nearer to defendants' plant. In sections where said smoke and fumes had theretofore been noticeable, said smoke and fumes would at times be present in greater strength and density than was customary when the fumes theretofore put in their appearance.

Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year were raised throughout said section, the winter-growing crops consisting largely of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and like winter-growing vegetables. The farms, prior to the appearance of the fumes and vapors mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia in which deponent resides, are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white and chestnut oak, and other varieties, the white pine, spruce, yellow pine, hemlock and other conifers or trees of the evergreen variety being in leaf throughout the winter. Since the appearance of said fumes conditions of forests, orchards and farms have changed. Large quantities of timber have died, orchards have been destroyed and killed, crops have failed, and much grain, which escaped to reach maturity, rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and fruit-trees throughout considerable areas are utterly ruined. Many farms have been abandoned to wild lands or permitted forfeited to the State for non-payment of taxes. The destruction of timber, crops, orchards and gardens has been greater during the spring and summer of 1906 than during any previous spring and summer, and the territory subject to such destruction much larger than ever before.

Under existing conditions farming throughout said section will soon be a thing of the past, as no farm can be successfully conducted under same. In addition, the complete and utter destruction of timber and orchards is near at hand, for, should the injury to and death of timber in the future progress as it has each year since the appearance of said fumes and vapors, but a short time will be required to complete the destruction which is already wide-spread.

Greater damage has been wrought to farms and lands, to timber, orchards, crops and gardens during the past spring and

summer (1906) than was accomplished in any three years previous—in fact more damage per month was apparent for the months of June, July and August of 1906 than was noticeable per year prior to this time. The injury is also increasing each month, that in August being in excess of July, and July greater than June, 1906.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
John Wilson	Farmer	45	1308.
W. E. Chance	"	7	1308.
D. J. Chance	"	7	1308.

Sworn to and subscribed before me, this 1st day of September, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Each of deponents is familiar with the location of defendants' furnaces. Each of deponents has by reason of his residence, and the particular occupation in which he is now engaged become familiar with the physical situation and characteristics of the larger part of said county. He is acquainted with the soil and the character thereof; the streams, the timber, the various species of trees which prevail in said forests; the general values of the land for agricultural and other purposes, and the general values of the trees for lumber and timber purposes.

Each of deponents says that the land when cleared of the trees, and particularly the land which is irrigated by streams, in his particular district is fertile, readily cultivated and produce in paying quantities corn, wheat and other crops. The soil is especially adapted for the raisin gof what is termed market truck.

Much of said county is devoted to agricultural purposes, and heretofore throughout said section to crops per year have been raised, the winter-growing crops consisting largely of wheat, rye, barley and small grain, and the garden or market truck of turnips, mustard, collards and the like. The farms have heretofore, and prior to the appearance of the hereinafter mentioned fumes, as a rule, been profitable to their owners, and have been cultivated from year to year, and were generally in good condition.

The timber interests in said section of the State are exceedingly large and valuable. The timber, either standing or cut, possesses a ready market. Many fine species of trees are to be found, such as the white pine, spruce, yellow pine, hemlock, hickory, white oak, chestnut, poplar, and a large number of other varieties, the white pine, spruce, yellow pine and other trees of the conifer or evergreen variety being in leaf throughout the entire winter.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears

to the eye to be a gray haze or vapor. It is perceptible to the eye and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponents have ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which has ever, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle towards the earth, and especially whenever the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during this summer. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

During the spring and summer of 1906, the smoke and fumes have been more continuously present than at any time before, have appeared and remained present not only more constantly, but in greater volume and strength. In addition, the vapor was present at hours not theretofore customary, and remained for much longer periods. Prior to said spring and summer of 1906 the fumes were usually noticeable only at night, late in the afternoon, or in the early morning, but during the past few months same have been present at times during practically all hours of the day and night.

Prior to said period of time the timber in the district in which deponents lives was healthy, sound, in good condition, and there was no appearance of any cause generally affecting injuriously either the timber as a whole, or operating upon any particular species. Trees would occasionally here and there die from old age and random fires, lightning, or other individual causes. These were, however, normal occurences, and the great body and bulk of the timber was in a normal, healthful, thriving condition.

Within the period of time mentioned, and since the fumes and vapors emitted by the defendants' furnaces have been noticed in the district in which each deponent resides, the general condition of the forests have changed—the timber is dying rapidly. It is no longer in a healthy condition. Much of it is dead. The percentage of dead trees to live trees has passed from a natural, normal per cent. to one which is entirely unnatural and abnormal. Some of the species have become practically extinct, such as the chestnut oak and hickory. It is a fact that in the district in which each deponent lives these two varieties of trees have been to a large extent exterminated. These trees wither, cast their leaves in the summer long prior to the fall, and die almost immediately. At the present rate of mortality of these two species it is a question of but a short time until they are absolutely exterminated in deponents' respective districts. In some of the districts of said county these trees have already become extinct.

Many other varieties of trees are showing similar effects, and are dying in substantially the same way, though requiring a greater length of time. Among these may be found the white pine, hemlock, white oak, the post- oak, and other varieties. Enormous quantities of these varieties are now in process of dying, the leaves wither and fall prior to the natural order of things. The leaves upon the white pine turn yellow. The trees disclose to the eye at a glance that they are in process of death. Trees showing these outward signs in the late summer often do not put out the following spring. The trees thus affected will not put out at the top. This, the most exposed part of the tree, is more quickly and readily affected than the under part, which is to a greater or less extent, protected by the surrounding undergrowth. The trees die from the top toward the bottom.

Deponents do not know of any other cause from which the results indicated could spring than that of the haze or mist above mentioned. There is no other haze, mist, vapor or fumes in said county from any other cause. There has been during said period of time no peculiar or unusual climatic changes. There has been nothing unusual in any other physical or natural condition of affairs. There has been neither ususual drouth nor excessive rainfall.

Each of deponents has been ordinarily familiar with the usual insects and bugs which have been found for many years

in his respective district. He has not within the past two or three years noticed or observed anything unusual either in number or variety of this form of natural life.

Deponents state that upon repeated occasions the haze or vapor mentioned above would settle upon the earth and come in physical contact with the crops that have been planted. In a single night after these fumes thus described would touch the vegetation it would be either entirely destroyed or seriously injured. It would wither and turn yellow summer-grown crops or vegetables as if a heavy frost had fallen upon them, though no frost had touched them, and utterly destroy the small grain and other winter-growing crops.

The same effect as that above described would be noticed upon the various orchards after one or more visitations, either the fruit being entirely destroyed or the product being small, dwarfed fruit entirely unfit for use.

The destruction of timber, orchards, crops, gardens and vegetation generally throughout deponents' section has been much greater during the spring and summer of 1906, than during the same period of any previous years, and the territory in which said destruction was apparent, has largely increased. The forests are being ruined, and under said conditions will soon be wholly destroyed.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE, YEARS.	DISTRICT.
I. G. Gee	Farmer	36	Noontootla.
P. G. Long	Farmer	30	"
E. C. Tilley	Farmer	30	"
W. I. Tilley	"	35	"
Dawson Stanley	"	25	"
G. W. Smith	Public	21	"
A. G. Kindall	Farming	33	"
J. R. Bradley	Farming	56	Morganton.
Alfred Farmer	Farming	30	"
E. H. Stanley	Farming	49	Noontootla.
S. H. Garland	Farming	21	"
E. W. Thurman		25	"
W. A. Thurman	Farming	30	"
W. G. Stanley		35	"

Sworn to and subscribed before me, this 10th day of September, 1906.

BENJ. M. TILLEY,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Each of deponents is familiar with the location of defendants' furnaces. Each of deponents has by reason of his residence, and the particular occupation in which he is now engaged become familiar with the physical situation and characteristics of the larger part of said county. He is acquainted with the soil, and the character thereof; the streams, the timber, the various species of trees which prevail in said forests; the general values of the land for agricultural and other purposes, and the general values of the trees for lumber and timber purposes.

Each of deponents says that the land when cleared of the trees, and particularly the land which is irrigated by streams, in his particular district is fertile, readily cultivated and pro-

duces in paying quantities corn, wheat and other crops. The soils is specially adapted for the raising of what is termed market truck.

Much of said county is devoted to agricultural purposes, and heretofore throughout said section to crops per year have been raised, the winter-growing crops consisting largely of wheat, rye, barley and small grain, and the garden or market truck of turnips, mustard, collards and the like. The farms have heretofore, and prior to the appearance of the hereinafter mentioned fumes, as a rule, been profitable to their owners, and have been cultivated from year to year, and were generally in good condition.

The timber interests in said section of the State are exceedingly large and valuable. The timber, either standing or cut, possesses a ready market. Many fine species of trees are to be found, such as the white pine, spruce, yellow pine, hemlock, hickory, white oak, chestnut, poplar, and a large number of other varieties, the white pine, spruce, yellow pine and other trees of the conifer or evergreen variety being in leaf throughout the entire winter.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eye and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponents have ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which has ever, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle towards the earth, and especially whenever the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence during each month. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

In the winter the smoke and vapor has heretofore been even more constantly present than during the summer previous, and clings more closely to the earth. This is especially true upon rainy, cloudy and foggy days, and when the atmosphere is dense, but the presence of the fumes and vapor is by no means confined to this character of weather.

During the spring and summer of 1906, the smoke and fumes have been more continuously present than at any time before, have appeared and remained present not only more constantly, but in greater volume and strength. In addition, the vapor was present at hours not theretofore customary, and remained for much longer periods. Prior to said spring and summer of 1906 the fumes were usually noticeable only at night, late in the afternoon, or in the early morning, but during the past few months same have been present at times during practically all hours of the day and night.

Prior to said period of time the timber in the district in which deponents lives was healthy, sound, in good condition, and there was no appearance of any cause generally affecting injuriously either the timber as a whole, or operating upon any particular species. Trees would occasionally here and there die from old age and random fires, lightning, or other individual causes. These were, however, normal occurences, and the great body and bulk of the timber was in a normal, healthful, thriving condition.

Within the period of time mentioned, and since the fumes and vapors emitted by the defendants' furnaces have been noticed in the district in which each deponent resides, the general condition of the forests have changed—the timber is dying rapidly. It is no longer in a healthy condition. Much of it is dead. The percentage of dead trees to live trees has passed from a natural, normal per cent. to one which is entirely unnatural and abnormal. Some of the species have become practically extinct, such as the chestnut oak and hickory. It is a fact that in the district in which each deponent lives these two varieties of trees have been to a large extent exterminated. These trees wither, cast their leaves in the summer long prior

to the fall, and die almost immediately. At the present rate of mortality of these two species it is a question of but a short time until they are absolutely exterminated in deponents' respective districts. In some of the districts of said county these trees have already become extinct.

Many other varieties of trees are showing similar effects, and are dying in substantially the same way, though requiring a greater length of time. Among these may be found the white pine, hemlock, white oak, the post-oak, and other varieties. Enormous quantities of these varieties are now in process of dying, the leaves wither and fall prior to the natural order of things. The leaves upon the white pine turn yellow. The trees disclose to the eye at a glance that they are in process of death. Trees showing these outward signs in the late summer often do not put out the following spring. The trees thus affected will not put out at the top. This, the most exposed part of the tree, is more quickly and readily affected than the under part, which is to a greater or less extent, protected by the surrounding trees and undergrowth. The trees die from the top toward the bottom.

Deponents do not know of any other cause from which the results indicated could spring than that of the haze or mist above mentioned. There is no other haze, mist, vapor or fumes in said county from any other cause. There has been during said period of time no peculiar or unusual climatic changes. There has been nothing unusual in any other physical or natural condition of affairs. There has been neither unusual drouth nor excessive rainfall.

Each of deponents has been ordinarily familiar with the usual insects and bugs which have been found for many years in his respective district. He has not within the past two or three years noticed or observed anything unusual either in number or variety of this form of natural life.

Deponents state that upon repeated occasions the haze or vapor mentioned above would settle upon the earth and come in physical contact with the crops that have been planted. In a single night after these fumes thus described would touch the vegetation it would be either entirely destroyed or seriously injured. It would wither and turn yellow summer-grown crops or vegetables as if a heavy frost had fallen upon them, though no frost had touched them, and utterly destroy the small grain and other winter-growing crops.

The same effect as that above described would be noticed upon the various orchards after one or more visitations, either the fruit being entirely destroyed or the product being small, dwarfed fruit entirely unfit for use.

Deponents state that in some of the districts of said county a number of farms have been abandoned because of the settling of these sulphur fumes from the defendants' furnaces upon the farm. Prior to the last few years none of these farms had, to deponents' knowledge, been afflicted in the way described. Said farms, prior to said times, had been cultivated in the usual, ordinary way, and produced the usual, ordinary results.

The destruction of timber, orchards, crops, gardens and vegetation generally throughout deponents' section has been much greater during the spring and summer of 1906 than during the same period of any previous years, and the territory in which said destruction was apparent has largely increased. Many farms throughout the locality in which this destruction is wrought have been abandoned as such, and deponents, from their knowledge of farming, state that no farm can be successful when subject to the conditions hereinbefore specified. The forests are likewise being ruined, and under said conditions will soon be wholly destroyed. Particularly is this true of the months of May, June, July and August of this summer. The damage during these four months being many times greater than during any preceding year, whole mountain sides being killed in a few days that put out in healthy foliage in the spring.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE, YEARS.	DISTRICT.
J. J. Carter.	Farmer	40	Morganton, Ga.
D. O. Davis.	"	10	" "

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
J. W. Davis	Farmer	30	Noontootla.
R. W. Woody	"	32	"
Larkin German	"	52	Toccoa.
W. R. Connelly.	"	38	"
A. C. Griffith.	"	52	Noontootla.
W. W. Doaley	"	3	Sugar Creek.
Mike Merrel.	"	22	"
A. Wilhurt	"	40	"
N. M. Green	"	37	Toccoa.
James B. Godfrey	"	33	Sugar Creek.
M. A. Green	"	52	Toccoa.

Sworn to and subscribed before me, this 31st day of August, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA—County of Murray.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous

copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist of vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

Particularly has this been the case during the spring and summer of this year, while heretofore, viz.: prior to May, 1906, these fumes were rarely ever noticed in deponent's neighborhood except late at night or early in the morning, but since this time these fumes have been present at times all hours of the day or night whenever the wind was from the direction of defendants' mines. Their appearance, too, has been marked more frequently and the fumes have been present in far greater strength and density than ever observed before. While before the spring and summer above mentioned, the destruction to timber and vegetation seemed to be accomplished gradually, since May of this year the destruction wrought has been much more signal than ever before known. Whenever said fumes have been noticed in unusual strength and volume in each of deponent's neighborhoods immediately thereafter, viz., in the next three or four days the timber and vegetation that had been enveloped in said fumes and exposed thereto would immediate-

ly show the evil effects of the same. The leaves on the timber would turn brown, shrivel up and fall from the trees. The corn leaves would be burnt and shrivel. The leaves on the peas and beans would likewise be wilted, and even the ragweeds and other hardy plants would wilt and perish as if the whole section had been visited by a severe frost.

Since the above spring and summer the fumes seem to have been given an increased carrying power, and seemed to have been condensed and concentrated and made far more deadly. They seem to have mounted higher altitude and been able to pass barriers of mountains and hills that hithertofore seemed to protect certain sections where no damage had heretofore appeared. Since the above time referred to these barriers have been passed and new sections have been blighted and devastated that have never before been visited. Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year have been raised throughout said section. The winter-growing crops consisting largely of wheat, rye, and small grain generally, and market or garden truck, of turnips, collards, mustards and greens and like winter-growing vegetables. The farms prior to the appearance of the fumes above mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia where deponent resides are exceedingly large and valuable. Among the species of trees found are white pine, yellow pine, hemlock, white and chestnut oak, and other varieties. The white pine, yellow pine, hemlock, and other conifers, or trees of the evergreen varieties being in leaf throughout the winter. Some species of timber in the forest, such as hickory and chestnut oak have been almost exterminated, and fruit trees throughout considerable areas are badly damaged. The destruction to timber, crops and orchards has been far greater during the spring and summer of 1906, and the territory showing destruction vastly widened and increased over anything ever before known. Each deponent knows of his own knowledge that since May of this year that the destruction to timber and vegetation has been multiplied many times over anything ever before experienced, and said destruction has been wrought and accomplished in much less time. Should the destruction of timber, orchards and crops continue in the future as it has since

May of this year, the complete and utter destruction of all timber and orchards is near at hand, as the destruction is already widespread.

NAME.	NO. YEARS IN DISTRICT	OCCUPATION.	DIST.	SECT.
C. L. Terry	60	Farmer	26	2
S. A. Gregory	40	"	26	2
J. P. Gregory	40	"	26	2
J. B. Gregory	32	"	26	2
W. J. Peeples	34	"	26	2
D. I. Isenhouer	44	"	26	2
G. H. Bates	45	"	26	2
Sam Hanson	29	"	26	2
W. P. Spears	30	"	26	2
W. A. Plemons	37	"	26	2
James G. Loughridge	61	"	26	2
Walter Harris	5	"	26	2
John H. Loughridge	55	"	26	2
Jacob H. Plemons	34	"	26	2
D F Gossag	43	"	26	2
N. B. Bates	52	"	26	2
John Johnson	30	"	26	2
J. L. McEntire	50	"	26	2
W. D. Gregory	40	"	26	2

Sworn to and subscribed before me, this 18th day of September, 1906.

E. L. BATES, J. P.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Murray.

Personally appeared the undersigned who, being duly sworn, in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for the number of years set opposite his name, and is engaged in the business there specified.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor, which possesses a peculiar odor, and is foul and offensive.

Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of vegetation has been most marked during

the spring and summer of 1906. In fact, the greatest injury to forests and vegetation has occurred within about the past six weeks. In many localities when the foliage seemed green and reasonably healthy in May, June, and even July, the leaves are now brown and seared, and frequently have wholly fallen from the trees and cover the ground as is usually the case in the late fall and early winter—after several frosts have fallen. These conditions are found in many localities previously immune from the injury.

The death of timber and vegetation has been much more speedily accomplished during the past few months than ever before. Formerly the timber injury seemed gradual, the leaves, after the presence of the fumes a few times, yellowing and later falling mainly from the tree-tops and upper branches of the timber. This summer, however, immediately after a single visit of the fumes in the unusual strength, noticeable for the first time this spring and summer, the leaves would look scalded and blistered, would turn brown, and often wholly fall from the trees. Other vegetation, crops, gardens, and even weeds, show similar effects. Much timber is now utterly denuded of leaves, and even the underbrush shows great damage.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE, YEARS.	DISTRICT.
Jas. Rice	Farmer	25	1506
J. B. Thompson	"	40	"
David White	"	30	"
F. M. Bray	"	33	"
W. H. Pellam	Millman	28	"
A. S. Rice	Farming	36	"
O. M. Klenets	"	19	"
L. L. Tateet	"	42	"

Sworn to and subscribed before me, this 17th day of September, 1906.

A. H. GREEN,
J. P. and Notary Public, Murray county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Murray.

Personally appeared the undersigned who, being duly sworn, in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for the number of years set opposite his name, and is engaged in the business there specified.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor, which possesses a peculiar odor, and is foul and offensive.

Since the appearance of said fumes the conditions of the orchards, forests and farms throughout deponent's neighborhood have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of vegetation has been most marked during

the spring and summer of 1906. In fact, the greatest injury to forests and vegetation has occurred within about the past six weeks. In many localities when the foliage seemed green and reasonably healthy in May, June, and even July, the leaves are now brown and seared, and frequently have wholly fallen from the trees and cover the ground as is usually the case in the late fall and early winter—after several frosts have fallen. These conditions are found in many localities previously immune from the injury.

The death of timber and vegetation has been much more speedily accomplished during the past few months than ever before. Formerly the timber injury seemed gradual, the leaves, after the presence of the fumes a few times, yellowing and later falling mainly from the tree-tops and upper branches of the timber. This summer, however, immediately after a single visit of the fumes in the unusual strength, noticeable for the first time this spring and summer, the leaves would look scalded and blistered, would turn brown, and often wholly fall from the trees. Other vegetation, crops, gardens, and even weeds, show similar effects. Much timber is now utterly denuded of leaves, and even the underbrush shows great damage.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
John Carter	Farmer	50	1506
John Baxter	"	45	"
John Dixon	"	50	"
C. P. Carr	"	34	"
O. B. Keener	"	22	"
P. G. Pateet	"	35	"
H. Lankford	"	40	"
Wm. Millage	"	40	"
Chas. Tasker	Lumberman	15	1265

Sworn to and subscribed before me, this 19th day of September, 1906.

A. H. GREEN,
J. P. and Notary Public, Murray county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for ten years, deponent's residence being in the Sugar Creek district of said county. Deponent is engaged in the business of farmer, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk,

Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation: On June 29th, when the smoke in great strength and volume appeared, and immediately thereafter deponent's crop of oats wited and died. His beans, potatoes and melons were killed. His grass and alfalfa were almost wholly destroyed.

There were other occasions where vegetation was killed, but the injury June 29th was more widespread than any other day.

D. R. BALLEW.

Sworn to and subscribed before me, this 28th day of August, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for forty-one years, deponent's residence being in the Sugar Creek district of said county. Deponent is engaged in the business of Farmer and is a property holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically

identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities

of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation was on July 4th, when the smoke appeared in great volume. Immediately after the smoke lifted off the bean vines and melon vines were scorched and blistered, nipped down, the young corn and the potatoes and cabbage were killed. Even the leaves upon the trees were shriveled and burned.

Many other occasions have occurred during the past summer, but the destruction was infinitely more widespread after the appearance of said fumes, July 4, 1906.

W. E. C. CURTIS.

Sworn to and subscribed before me, this 28th day of August, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for fifty years, deponent's residence being in the Morganton district of said county. Deponent is engaged in the business of farmer and is a property holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk.

Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation was August 12th, when a heavy vapor or fog of said smoke enveloped deponent's farm, and immediately thereafter the beans were killed and cabbage and fruit ruined. Corn was injured, and even the weeds looked as though they had been frost-bitten. Deponent's children, five in number, suffered from nose-bleed shortly after the appearance of said fumes.

Much timber showed injury immediately after said smoke lifted. Damage has been apparent after other appearance, but the damage was not so large as at said time.

W. S. WATKINS.

Sworn to and subscribed before me, this 28th day of August, 1906.

J. R. CHASTAIN,
U. S. Commissioner Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for thirty years, deponent's residence being in the Colwell district of said county. Deponent is engaged in the business of farmer and is a property holder of said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk.

Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation was at deponent's farm in Gilmer county, four miles east of Cherry Log, on the night of August 11th and day following, when said smoke appeared in great density and strength. Immediately afterwards deponent's beans wilted and died, as did deponent's tomatoes and cabbage, and his fruit shriveled and failed.

The smoke has appeared on several other occasions, after which timber and vegetation showed injury. The injury is many times greater during the present year than ever before.

W. S. WALKINS.

Personally appeared J. W. Watkins who, being duly sworn, says that he has read the foregoing affidavit and knows same to be true Deponent is a neighbor of W. S. Walkins, and experienced practically the same injury on the date and in the manner described in the foregoing affidavit.

J. W. WATKINS.

Sworn to and subscribed before me, this 28th day of August, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for eleven years, deponent's residence being in the____ district of said county. Deponent is engaged in the business of farmer and is a property holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk.

Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation was on August 11th and 12th, when the smoke was present in unusual strength, and immediately thereafter potatoes were killed and blistered, and corn seriously injured. In fact, deponent's garden truck was almost entirely destroyed.

Other injuries at different times have occurred, but none so great as on the dates specified.

W. E. MILLER.

Sworn to and subscribed before me, this 28th day of August, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for forty-five years, deponent's residence being in the Toccoa district of said county. Deponent is engaged in the business of farmer and is a property holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk.

Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation: The third Sunday in July, when the smoke came down very strong and dense, and when same lifted, cabbage, beans, tomatoes and potatoes looked scalded and wilted, and were well-nigh wholly destroyed.

In June considerable injury was done the corn, but the vegetation was not so badly injured as on first mentioned date. Other times, which deponent does not remember as to exact date, showed injury after the appearance of said smoke. On said Sunday, in addition to the garden truck, deponents fruit wilted and his orchard was badly injured.

WM. ROBINSON.

Sworn to and subscribed before me, this 28th day of August, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for four years, deponent's residence being in the Toccoa district of said county. Deponent is engaged in the business of farmer and is a property holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk.

Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation: This deponent lives in Toccoa district, where he is engaged in farming. During my vacation at above place the smoke and fumes settled repeatedly in my territory on June 28th, 29th and 30th of this it was particularly strong. On one of these days this deponent saw these fumes approaching before the wind from the defendants' mines. It looked like a rain cloud, but when it reached me I knew at once by the strong odor that it was the fumes. They were unusually strong. In the next few days my cabbages, tomatoes, peas, beans and the fruit trees showed the effects, leaves withering and browning up the same as if it was struck by heavy frost. The timber, too, all about me, showed the effects also, and all looked like one would expect to see it in late October or November, after the frosts had come. This deponent knows that the vegetation all about his section has suffered more from the fumes from the defendants' plants since May, this year, than ever before in the history of his section.

R. C. MILLER.

I am an adjoining neighbor of R. C. Miller, whose foregoing affidavit I have read, and of my own knowledge, know same to be true. Deponent suffered practically the same injury, and at the time and in the manner in said affidavit stated.

W. L. ROGERS.

Sworn to and subscribed before me, this 28th day of August, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for eleven years, deponent's residence being in the Toccoa district of said county. Deponent is engaged in the business of farmer and is a property holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk.

Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation: On or about July tenth, June eleventh and August twenty-fifth, the smoke came down in great volume, killing peas, beans and market truck generally, and orchards and timber.

JOHN MILLER.

Sworn to and subscribed before me, this 28th day of August, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for fifty-three years, deponent's residence being in the Toccoa district of said county. Deponent is engaged in the business of farmer and is a property holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk.

Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation was during the latter part of June, when said smoke came down in volume and immediately after the potatoes and beans shriveled and died, and deponent's fodder was rotted. In addition, deponent's fruit, peaches and apples, wilted and were utterly ruined. On other days similar effects were noticeable, but not to quite as great an extent as at said time.

GILES GREEN.

Sworn to and subscribed before me, this 28th day of August, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for fifty-seven years, deponent's residence being in the Toccoa district of said county. Deponent is engaged in the business of farmer and is a property holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk.

Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it ket truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation: This deponent is a farmer and resides seventh and second Fannin county, Ga., some seventeen miles from the defendants' mines. During June of this year, between the tenth and twentieth, this deponent saw the fumes from the defendants' mines repeatedly in his neighborhood, and one day during this time it was particularly strong, so as to cause me to cough and sort of strangle. Shortly after this time the leaves on my timber and my neighbors' timber turned brown and dropped off like frost had struck the trees. The leaves now would burn if fire were put to them. My corn, too, showed the evil effects and seemed to lose vitality and stopped growing. In July of this year we were visited again, along about the twenty-fifth, when the fumes were very strong. At this time it killed my tomato vines, and it ruined my peaches, causing the leaves to shrivel up and turn brown and drop off. The fumes have been much oftener in my section this spring and summer than ever before, and the destruction to vegetation and all timber has been much greater than ever before in the history of this section.

M. F. Davenport.

Sworn to and subscribed before me, this 28th day of August, 1906.

J. R. Chastain,
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA—County of Murray.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for fifty-two years, deponent's residence being in the 10th district, 3d section, of said county. Deponent is engaged in the business of farmer, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or hea y with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have

been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation, he further states as follows:

He says he has observed the mist or gray fog during the summer season of the present year (1906). I have at several times smelled the sulphuric fumes, and have called other people's attention to the fact. I have had a number of trees in my orchards—apple and cherry—and the leaves become spotted and curl up and look as if they had been burned, and the appearance of the trees at the present time—a good many of them— being dead and dying. I also note at the present time that my shade trees are permanently losing their foliage, by the leaves looking as if they had been sprayed with some deadly acid, and I have also noticed that in the large quantity of timber in the forest east of where I now live, there is more dead timber than I have ever known in the last five years.

SAM'L L. CIMMIER.

Sworn to and subscribed before me, this 5th day of September, 1906.

E. L. BATES,
Justice of the Peace, Murray county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 37 years, deponent's residence being in the 958th district of said county. Deponent is engaged in the business of Farming and Lumber, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically

identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the or-

chards, forest and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation: Deponent, on August 10th last, was some four miles south of the town of Ellijay, near Eller Gap, when the smoke and fumes came down thick and heavy. It enveloped the surrounding country and timber so thick that one could scarcely see. It was strong, and had a very unpleasant odor. Within five days after this time timber that was green and healthy on August 10th, was badly damaged. The leaves all about showed brown and seared, and began falling from the trees.

This deponent is well acquainted in Gilmer county; knows the timber, the farms and the fruit interests. Deponent knows of his own knowledge that the damage to timber and all vegetation in this county has been multiplied many times since spring of 1906, over anything ever known in a like period in the history of this county since he has been a resident of it. Country that had never shown any damage before this year, is badly affected now, and should the evil be not arrested, and it increase as fast in the near future as it has since April of this year, the whole timber of the county will be absolutely ruined in a very short time, as injury is now widespread and increasing at an alarming rate.

J. T. Sharp.

Sworn to and subscribed before me, this 21st day of September, 1906.

W. T. Pickett,
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enter-

prise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been aban-

doned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation: On 29th of June, 1906, when the smoke in great volume and strength was apparent. After the smoke lifted the beans, cabbage and other garden truck was scalded in appearance, and soon died. Even the weeds were killed down.

Many other days the smoke was quite strong, and afterward the vegetation not previously destroyed, showed damage and was frequently killed in spots.

Sworn to and subscribed before me this 28th of August, 1906.

J. J. CARTER.

J. R. CHASTAIN,

U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enter-

prise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and sohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profiitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been aban-

doned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation was about June 10th, when heavy banks of smoke appeared, and after same disappeared deponent found his beans, cabbage and potatoes killed and his alfalfa patch of several acres utterly destroyed.

On June 20th the smoke again came down in strength and killed the remaining garden truck, including deponent's melons, and in addition, utterly destroyed the fruit on deponent's trees, the fruit appearing as though it had been cooked. At said time not only the fruit trees, but bodies of timber, acre after acre, was killed, the leaves dying, turning brown and falling off. The smoke appeared on other occasions killing remaining vegetation, but the greatest injury was at said dates.

J. M. C. PORTER.

Sworn to and subscribed before me, this 28th day of August, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 50 years, deponent's residence being in the Tococa district of said county. Deponent is engaged in the business of farmer, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk.

Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation was during the last week of June, at which time the smoke appeared in unusual volume, strength and density. After a couple of hours the vapor lifted, and immediately thereafter the corn turned yellow, as if frost-bitten, and the potatoes in deponent's patch began to shrivel up and wither, as if scalded. There were other instances, but at this said time the destruction was widespread. Not only were vegetables killed and injured, but even the weeds were killed down.

J. M. HALL.

Sworn to and subscribed before me, this 28th day of August, 1906.

J. R. CHASTAIN,
U. S. Commissioner, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 40 years, deponent's residence being in the Toccoa district of said county. Deponent is engaged in the business of farming, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk.

Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation was about the middle of August, when a heavy smoke fell upon deponent's orchard, which was well filled with peaches. Within a short time the peaches were blistered and shriveled in appearance, and were wholly destroyed. Practically all were killed.

On September 1st and 2d the smoke enveloped deponent's garden, killing down deponent's beans, cabbage and tomatoes, and greatly damaged deponent's tobacco.

Deponent lives in the Blue Ridge district of Fannin county, south of the town of Blue Ridge, about two miles. Deponent's orchard was about a half-mile from his garden, which was killed after said fruit was ruined.

Deponent also has a field of ginseng, which also suffered severe injury both to the ginseny and also by destroying the shade over the patch.

JNO. B. TIPTON.

Sworn to and subscribed before me, this 13th day of September, 1906.

THOS. A. BROWN.
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physic-

ally identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, and mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color, and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and said smoke and fumes present in much greater volume and strength than theretofore observed. In addition where previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day or night.

These fumes and vapors have not appeared with equal frequency or volume in all parts of the county of deponent's residence, the same apparently being governed, in a measure, by the topography of the country. Prior to the past few months the appearance of the fumes was largely confined to valley lands, adjacent to, or radiating from, the Ducktown basin, or streams emptying therein, or lands unprotected by hilly or mountainous or other character of barriers. During the spring and summer of 1906, however, the fumes appear to have had greater carrying power, have reached higher altitudes, gone further, and passed barriers which theretofore protected localities previously immune therefrom. The fumes have not only appeared in localities theretofore exempt from same, and at greater distance from the plants of said copper companies, but said fumes were at times present in said localities in greater strength and volume than theretofore noticed by deponent in localities much nearer to defendants' plant. In sections where said smoke and fumes had theretofore been no-

ticeable, said smoke and fumes would at times be present in greater strength and density than was customary when the fumes theretofore put in their appearance.

Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year were raised throughout said section, the winter-growing crops consisting largely of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and like winter-growing vegetables. The farms, prior to the appearance of the fumes and vapors mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia in which deponent resides, are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white and chestnut oak, and other varieties, the white pine, spruce, yellow pine, hemlock and other conifers or trees of the evergreen variety being in leaf throughout the winter. Since the appearance of said fumes conditions of forests, orchards and farms have changed. Large quantities of timber have died, orchards have been destroyed and killed, crops have failed, and much grain, which escaped to reach maturity, rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and fruit-trees throughout considerable areas are utterly ruined. Many farms have been abandoned to wild lands or permitted forfeited to the State for non-payment of taxes. The destruction of timber, crops, orchards and gardens has been greater during the spring and summer of 1906 than during any previous spring and summer, and the territory subject to such destruction much larger than ever before.

Under existing conditions farming throughout said section will soon be a thing of the past, as no farm can be successfully conducted under same. In addition, the complete and utter destruction of timber and orchards is near at hand, for, should the injury to and death of timber in the future progress as it has each year since the appearance of said fumes and vapors, but a short time will be required to complete the destruction which is already wide-spread.

Since the erection of the high stack, this spring, by the Tennessee Copper Company, the destruction to all vegetation and crops, fruit and farming has been multiplied many times

more than ever before. Since May of 1906 the destruction has been multiplied in the territory of these deponents —

NAME.	OCCUPATION	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
John M. Hall	Farmer	42	8th and 2d District.
W. H. Mull	"	41	" " " "
John Farmer	"	38	
E. A. Hall	"	30	
Jacob Pope	"	1	
L. A. Gilliam	"	32	
G. J. Gregory	Farmer	35	" " " "
W. J. Bramlett	"	21	" " " "
John W. Thomas	"	36	" " " "
B. A. Collis	"	4	" " " "
Virgil Collis	"	4	" " " "
G. W. Foster	"	38	9th and 2d District.
T. B. Foster	"	21	" " " "
J. B. Ensley	"	24	" " " "
G. W. Patterson	"	54	" " " "
G. W. Phillips	Senator 41st Dist.; Farmer	43	" " " "
B. H. Phillips	Farmer	18	" " " "

Sworn to and subscribed before me, this 29th day of August, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, Sheriff thereof, and is a property-holder of said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enter-

prise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been aban-

doned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation was about the middle of July, when the smoke came down unusually strong, immediately after which the vegetables in deponents garden wilted down as though they had experienced a killing frost. In addition, deponent's corn and timber showed immediate injurious effect, the leaves on the trees shriveling and afterwards falling to the ground.

W. B. Lovingood.

Sworn to and subscribed before me, this 13th day of September, 1906.

Thos. A. Brown,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 25 years, deponent's residence being in the Sugar Creek district of said county. Deponent is engaged in the business of farming, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk.

Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation was about three weeks ago, when the smoke enveloped deponent's farm, utterly ruining much of deponent's garden truck, biting down beans and tomatoes, and even killing the ragweeds. Most of the injury to timber has occurred during the past six weeks. Much timber that was green and in leaf but a short time ago, is now covered with dead leaves, or wholly denuded of leaves.

SAMUEL YOUNG.

Sworn to and subscribed before me, this 13th day of September, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has

observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occa- three years been a matter of repeated occurrence. This vapor sionally occurs during the year. It has within the past two or has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has

been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. In fact, the smoke has been constant in deponent's locality. In June peas were killed down and several times the garden truck was killed back. In different localities on several occasions the leaves would look scalded after the fumes came down in a single night. Deponent lives in Glenn county, three and one-half miles from Cherry Log, in a northerly direction, deponent's farm being between Chery Log and Blue Ridge, Ga.

J. W. WISHON.

Sworn to and subscribed before me, this 13th day of September, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 29 years, deponent's residence being in the Toccoa district of said county. Deponent is engaged in the business of farming, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and sohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profiitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk.

Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation was September 2, 1906, when the smoke came down in great volume, utterly destroying deponent's garden truck, including over eight hundred cabbage, as well as all beans and tomatoes.

Deponent, in addition, had three October peach trees, and at said time the trees were heavy with fruit. Immediately after said smoke lifted the peaches shriveled and same were utterly ruined. Even the ragweeds and like vegetation failed to escape, the same being wilted, scalded and bitten down.

Deponent's farm is located about four miles on line south of the town of Blue Ridge.

W. R. STEWART.

Sworn to and subscribed before me, this 13th day of September, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for forty-nine years, deponent's residence being in the Toccoa district of said county. Deponent is engaged in the business of farming and merchandising and is a property holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically

identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities

of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring summer.

Deponent further deposes and says that he owns a farm located in Sugar Creek district of said county, located about eight miles south of the defendants' copper plants, and about four miles north of the city of Blue Ridge, where deponent resides. For the last two or three years the sulphur fumes generated by defendants' smelters has been affecting injuriously the timber and vegetation in the community and surrounding country where his said farm is located. The fumes complained of have been noticeable in this section of the county for the above length of time, in fact, ever since the erection of defendants' furnaces. Since the erection of the high stack of the defendant, The Tennessee Copper Company, the smoke and fumes from said furnaces have been observable in the section in which his said farm is located in much greater volume and strength than at any time previous to this summer and past spring, and the damage inflicted to and on timber and vegetation is very much more widespread than ever before. The extent of the territory affected by said fumes has been very greatly extended since the erection of said high stack, and for many miles the leaves of the trees have been killed, and that, too, in communities and sections of the surrounding country not heretofore affected by the fumes and smoke and gases generated by defendants' furnaces. Deponent has traveled extensively during this summer over practically all of that section of Fannin county north of the line of the Knoxville division of the Louisville

& Nashville Railroad Company, with which section of the county deponent is, and has been, well acquainted for the last twenty-five years, and especially for the time said section of country has been injuriously affected by the fumes from defendants' furnaces, and deponent observes that the damages to timber and vegetation has been greatly increased during this summer and past spring. Much of said section which last year showed but little damage to timber and vegetation now appears to be very greatly injured and damaged by said fumes. The erection of said high stack has had the effect of carrying the destructive and deadly fumes from said furnaces to localities not heretofore affected, and has increased the damages to timber and vegetation in sections of the country which had been before damaged by said sulphur fumes. The leaves on the trees growing in all the section of the county above described have been scorched, blistered, browned and seared, and are now falling to the ground. The entire section presents the appearance of the country in the months of October and November after the falling of frost. The leaves on the trees in the city of Blue Ridge present the same appearance.

J. R. Willis.

Sworn to and subscribed before me, this 30th day of August, 1906.

Thos. A. Brown,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-stated case, each deposes and says as follows:

He has been a resident of said county and State for the number of years set opposite his name. That he has resided in the particular district and section of said county which is likewise set opposite his name. Each of deponents is a property-owner in said county, and each is engaged in the business set opposite his name.

Deponent is familiar with the farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting enormous quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor which is foul and exceedingly offensive. It is different from anything which deponents has ever experienced.

The color, the haze, the effect upon the eyes, the character

of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, and mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponents have observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially whenever the air is dense or heavy with moisture. The odor, color, and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has, within the past two or three years, been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and said smoke and fumes present in much greater volume and strength than theretofore observed. In addition where previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day or night.

These fumes and vapors have not appeared with equal frequency or volume in all parts of the county of deponent's residence, the same apparently being governed, in a measure, by the topography of the country. Prior to the past few months the appearance of the fumes was largely confined to valley lands, adjacent to, or radiating from, the Ducktown basin, or streams emptying therein, or lands unprotected by hilly or mountainous or other character of barriers. During the spring and summer of 1906, however, the fumes appear to have had greater carrying power, have reached higher altitudes, gone further, and passed barriers which theretofore protected localities previously immune therefrom. The fumes have not only appeared in localities theretofore exempt from same, and at greater distance from the plants of said copper companies, but said fumes were at times present in said localities in greater strength and volume than theretofore noticed

by deponent in localities much nearer to defendants' plant. In sections where said smoke and fumes had theretofore been noticeable, said smoke and fumes would at times be present in greater strength and density than was customary when the fumes theretofore put in their appearance.

Much of the country in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year were raised throughout said section, the winter-growing crops consisting largely of wheat, rye, and small grain generally, and the market or garden truck of turnips, collards, mustard and like winter-growing vegetables. The farms, prior to the appearance of the fumes and vapors mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in good condition.

The timber interests in the section of Georgia in which deponent resides, are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white and chestnut oak, and other varieties the white pine, spruce, yellow pine, hemlock and other conifers or trees of the evergreen variety being in leaf throughout the winter. Since the appearance of said fumes conditions of forests, orchards and farms have changed. Large quantities of timber have died, orchards have been destroyed and killed, crops have failed, and much grain, which escaped to reach maturity, rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and fruit-trees throughout considerable areas are utterly ruined. Many farms have been abandoned to wild lands or permitted forfeited to the State for non-payment of taxes. The destruction of timber, crops, orchards and gardens has been greater during the spring and summer of 1906 than during any previous spring and summer, and the territory subject to such destruction much larger than ever before.

Under existing conditions farming throughout said section will soon be a thing of the past, as no farm can be successfully conducted under same. In addition, the complete and utter destruction of timber and orchards is near at hand, for, should the injury to and death of timber in the future progress as it has each year since the appearance of said fumes and vapors, but a short time will be required to complete the destruction which is already wide-spread.

NAME.	OCCUPATION.	LENGTH OF RESIDENCE. YEARS.	DISTRICT.
J. R. Ballew	Farmer	40	40
Lon Dillard	"	31	30
I. N. Horten	"	25	25
W. O. Mull	"	40	40
I. H. Roberson	"	4	4
M. A. Farmer	"	21	21
W. S. Smith	"	40	40
L. S. Smith	"	20	20

Sworn to and subscribed before me, this 10th day of September, 1906.

JOHN F. MCNEELY,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 22 years, deponent's residence being in the Sugar Creek district of said county. Deponent is engaged in the business of farming, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year

throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for nonpayment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows: Deponent owns, cultivates and resides on a small farm in said county and district located about ten miles southwest from the furnaces of defendants. On many occasion during the spring and summer of the present year the smoke and fumes from the furnaces of defendants came down upon the farm, crops and timber of deponent in very great volume and strength. If the fumes were present in the early morning the effect upon the vegetation could be readily observed in the afternoon of the same day. The bean, pea and Irish potato vines would present the appearance in the evening of having been burnt or frost-bitten,

although no frost had fallen. The ragweeds would also be affected in the same manner. The leaves on the trees would be scorched, blistered and browned. They are now, and for some time have been, falling to the ground.

The smoke and fumes from the furnaces of defendants have been present in the neighborhood of deponent more frequently this spring and summer (1906), and in much greater volume and strength than during any other year, and the damages wrought thereby have been much greater than during any forme ryear. The damage to timber and crops in the aggregate this year is more than double that of any other three years combined.

MIKE MERRILL.

Sworn to and subscribed before me, this 12th day of September, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for three years, deponent's residence being in the Sugar Creek district of said county. Deponent is engaged in the business of farming, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore, two crops per year

throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows: Deponent resides on and cultivates a farm in said district and county, located about nine miles from the furnaces of defendants. Deponent has been three years on the same farm. On a great many occasions during the spring and summer of this year the smoke and fumes from defendants' furnaces came down on said farm and the crops planted and growing thereon.

Soon after the same would lift and be blown away deponent noticed that pea, bean and Irish potato vines, beets and other vegetables would wilt down and turn white, as though they had been burnt by fire or frost-bitten. The corn was also affected

in the same manner. The leaves on the trees have been scorched and browned and are now falling off. There has been no frost to bite growing crops this season, or forest fires to affect the leaves on the timber. The damage done to crops and timber this season has been much greater than in the other two years past and previous to this year combined.

W. W. DOOLEY.

Sworn to and subscribed before me, this 12th day of September, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 53 years, deponent's residence being in the Sugar Creek district of said county. Deponent it engaged in the business of farming and dairying, and is a property-holder in said county.

Deponent is a resident of said State and county, and has been for thirty-three years, deponent's residence being in the Hemptown district of said county. Deponent is engaged in the business of merchandise, etc., and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are dis-

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore, two crops per year

throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows: Deponent owns and resides on a farm in said county and district located seven miles south of defendants' furnaces. At various times during this past spring and summer (1906), and especially on the fourth day of July, the smoke and fumes from defendants' furnaces came down on deponent's farm, and as soon as the same had cleared away the bean, pea and Irish potato, tomato and cucumber vines were scalded and blistered. The corn has been injured and damaged at various times during its entire growing season. It will not produce exceeding a half crop. The blades on the cron have rotted until nothing is left but the

stems. The leaves on the fruit and forest trees on deponent's farm have been killed by the fumes, and the fruit has been dwarfed and is of little or no value. The damage done this year to fruit crops and timber greatly exceeds that of any previous year, and territory heretofore affected by these fumes has been very greatly extended.

B. C. ARP.

Sworn to and subscribed before me, this 13th day of September, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 40 years, deponent's residence being in the Morganton district of said county. Deponent is engaged in the business of farming and is a property-holder in said county.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the past few months. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year throughout said section were harvested, the winter-growing

farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows: Deponent resides at Morgantown, about fourteen miles from defendants' furnaces. Deponent, during the summer of this year, has often and at various times observed the appearance of the fumes from said furnaces on the farm which he cultivates, in great volume and strength. After the fumes had cleared away, deponent noticed that his bean and pea vines had been scorched and blistered. The corn was also affected in the same manner. The leaves on the timber were browned and killed, and are now falling to

the ground. The territory affected by these fumes has been very much widespread and extended during this summer.

DAVE DICKEY.

Sworn to and subscribed before me, this 13th day of September, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer:

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for forty years, deponent's residence being in the Sugar Creek district of said county. Deponent is engaged in the business of farming and is a property-holder in said county.

Deponent is a resident of said State and county, is a property-holder in said county, and is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location

of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance

of the fumes and vapors before mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows: Deponent resides on and cultivates a farm in said county and district located about ten miles from the furnaces of The Tennessee Copper Company, and about thirteen miles from that of the Ducktown Sulphur, Copper and Iron Company, the two defendants in the above-styled case. During the last spring and summer (1906) the smoke and sulphur fumes from the defendants' furnaces, located at McCay and Isabella, Tenn., came down on the farm aforesaid cultivated by deponent in very great volume and strength. Deponent does not now remember the exact dates of the visitations referred to. Soon after the smoke and fumes were lifted and blown away deponent noticed that his pea, bean and Irish potato vines were scorched and blistered and very greatly injured and damaged. The leaves on the timber in deponent's neighborhood have been browned and seared and

are now falling to the ground in great quantities as in late fall after the falling of very severe frosts. The damages done to timber, orchards and crops of all kinds this past summer and spring (1906) has been much greater than ever before. The erection of the high stack by The Tennessee Copper Company at McCay, Tenn., has very greatly extended the territory formerly affected b ythe smoke and fumes from defendants' furnaces.

A WEHUNT.

Sworn to and subscribed before me, this 12th day of September, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 36 years, deponent's residence being in the Sugar Creek district of said county. Deponent is engaged in the business of farmer, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the ap-

pearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for nonpayment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation: This deponent lives in Sugar Creek district, Fannin county, Ga., some twelve miles from defendants' works. On the 27th of August, 1906, the smoke and fumes from the defendants' mines came down in great volume on his home farm, and within a few hours after it was lifted or dispelled, it blistered and seared the bean vines like a heavy frost had fallen, and killed nearly all of them. In June this same year, viz., 1906, the smoke killed our flowers, potatoes, peas and beans and watermelon vines at the same time. During this same time the timber, too, showed the effects, the leaves turned brown and seared for miles around my home, and the whole country shows as if a frost had hit it within four or five days after the smoke was present.

J. W. THOMAS.

Sworn to and subscribed before me, this 29th day of August, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer:

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been fo forurten years, deponent's residence being in the—— district of said county. Deponent is engaged in the business of farming and gardening and is a property-holder of said county.

Deponent is a resident of said State and county, and has been for forty-five years, deponents residence being in the tenth district, second section of said county. Deponent is engaged in the business of farmer and lumberman, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It

is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, yellow pine,

hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows: Deponent owns and resides on a small farm about one mile from Blue Ridge, Ga., and about ewelve miles south of defendants' furnaces at Ducktown. Deponent is engaged in the business of market gardening, and cultivates grapes, strawberries, tomatoes, peas, beans, cabbage, beets, Irish potatoes, turnips and other things usually raised by market gardeners. At various times during the past spring and summer (1906) the smoke and poisonous fumes from the defendant's furnaces came down on his said farm, and the growing vegetables above mentioned, in great volume and strength, and soon after the same had blown away the various vegetables above mentioned, and the grapes and corn, would become scorched, burned and blistered, and in many instances the same would be totally ruined and destroyed. It is impossible to engage in the business of growing vegetables for market, or home use, in the territory affected as deponent's farm has been this season by the smoke and fumes from defendants' furnaces, to any profit. Deponent has been cultivating his said farm as a market gardener for the past six years, and for about three years of that time with reasonable and fair profits. About three years ago the fumes from defendants' furnaces began to make their appearance on his said farm,

affecting his said crops more or less. The injurious effects on his market truck has been gradually increasing from year to year, but the injury done to same during this past spring and summer has been greater than in all former years combined. The erection of the high stack by The Tennessee Copper Company this year has greatly aggravated the situation. The smoke and fumes are present more often and in much greater volume and strength than ever before. The leaves on the timber in and about deponent's farm—and, in fact, for miles adjacent thereto—have been browned and seared by these fumes, and are now falling to the ground as in late fall after the falling of frost. The smoke and fumes this season from defendants' furnaces have completely put deponent out of business as a market gardener. That which has not been completely killed has been so dwarfed as to render it unsalable in market.

WM. BRINKLEY.

Sworn to and subscribed before me, this 11th day of September, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 33 years, deponent's residende being in the Sugar Creek district of said county. Deponent is engaged in the business of——and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge

of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows: Deponent resides on and cultivates a small farm in said county and district located about nine miles southeast of defendants' furnaces. Deponent also owns another small farm located in Flint Hill district of said county, about seven miles southwest of defendants' furnaces. On frequent occasions during this summer the smoke and fumes from defendants' furnaces came down on the farm which deponent cultivates in great volume and strength, and soon after it lifted the bean, pea and Irish potato vines were scorched and blistered, and were greatly damaged. The leaves on the fruit trees and forest trees were also affected in the same manner. This caused the fruit to shed before maturity. The leaves on practically all of the growing trees in deponent's neighborhood have been thus affected, and have fallen to the ground in great quantities. The damages wrought by these fumes have been largely increased during this year.

JAMES B. GODFREY.

Sworn to and subscribed before me, this 13th day of September, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 30 years, deponent's residence being in the Noontootly district of said county. Deponent is engaged in the business of farming, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge

of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have

been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows: Deponent owns and resides on a farm located in Noontootly district, near the foot of the Blue Ridge mountains, about thirty miles south of the copper plants of defendants. In the early part of June, 1906, the smoke and fumes from defendants' furnaces came down on the farm of deponent, located as aforesaid, and soon thereafter the bean vines wilted and the young corn growing in a field on the south side of an elevation was scorched, blistered and turned white, presenting the appearance of having been severely frostbitten. The corn afterwards grew out, but has been very greatly injured, and its yield will be cut considerably short this season on this account. The leaves on the trees in deponent's community have been killed and are now falling to the ground, and the forests now have the appearance of having been burnt, although thre has been no forest fires in said community. At about this time deponent was in Gilmer county at New Liberty church, some thirty-four miles from defendants' furnaces, when the smoke came down in that section of country and produced the same effect upon timber and vegetation as described in reference to deponent's farm in Fannin county. The erection of the high stack by The Tennessee Copper Company has served only to increase the extent of the territory heretofore injured and damaged by defendant's furnaces.

R. W. Woody.

Sworn to and subscribed before me, this 31st day of August, 1906.

Thos. A. Brown,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 46 years, deponent's residence being in the Sugar Creek district of said county. Deponent is engaged in the business of farming, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge

of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been aban-

doned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows, to wit: Deponent owns, cultivates and resides on a farm in said district and county, about eight miles south of defendants' furnaces at McCay, Tenn. Sometime in the month of June, 1906, the smoke and fumes from defendants' furnaces came down upon the farm of deponent in great volume and strength, and deponent had about one-half acre planted in Irish potatoes which were then in a fine growing condition with good prospects of making a very large yield. Soon after the smoke and fumes cleared away the vines of the potatoes appeared to be frostbitten and turned black. Alongside of the Irish potato patch deponent had also a sweet potato patch, and they were injured in the same way. The potatoes have been cut short by reason of this injury about one-half.

Deponent has formerly made an affidavit in this case, and he now adds the facts herein stated, and the additional fact that the damage and injury to timber, crops and vegetation in deponent's section has been greatly increased since the erection by The Tennessee Copper Company's high stack. Much more damage in every way has been done since.

J. E. Cochran.

Sworn to and subscribed before me, this 3d day of September, 1906.

Thos. A. Brown,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 40 years, deponent's residenbe being in the Cold Well district of said county. Deponent is engaged in the business of——and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically

identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities

of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

Deponent owns a farm located in said county and within sixteen miles southwest of defendants' copper plant. The timber on my place has been at least one-third killed. The smoke and fumes from defendants' works is often observed in my community, and has been for the last four years, and until its appearance, the timber in deponent's community has been in a healthy, sound and growing condition.

N. D. DYER.

Sworn to and subscribed before me, this 30th day of August, 1906.

THOS. A. BROWN,

Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 32 years, deponent's residence being in the Noontootly district of said county. Deponent is engaged in the business of farming, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk.

Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows: Deponent owns and cultivates a farm located in Noontootly district, of Fannin county, and situate about twenty-two miles directly south of defendants' furnaces. On or abont the tenth day of August, 1906, the smoke and sulphur fumes from defendants' furnaces made their appearance on the farm of deponent and generally in deponent's community, in great volume and strength. Soon after it lifted deponent noticed the growing corn on his said farm had been bitten in the bud, and about the ground blades as though bitten by a severe frost. The beans, leaves and vines, tomato vines were scorched, burnt and blistered, and soon wilted, presenting the appearance of being frostbitten. The peach and apple trees and growing timber were at the same time affected likewise. The damage done to timber and vegetation in deponent's section of the county has been very greatly increased since the erection of the high stack by The Tennessee Copper Company.

J. W. Davis.

Sworn to and subscribed before me, this .. day of ....., 1906.

Thos. A. Brown,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 37 years, deponent's residence being in the 844th district of said county. Deponent is engaged in the business of farmer and is a property holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have

been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation is at this time—September 7, 1906—that the atmosphere is full of smoke, the sunshine so weak it is almost impossible to cure hay or fodder. I have a small apple and peach orchard and hardly got one of either that was fit to eat. They all rotted before maturity; also beans, cabbage, and all other garden truck. The timber looks almost like there had been a killing frost, and a good deal of it is dying.

C. L. TILLEY.

Sworn to and subscribed before me, this 7th day of September, 1906.

BENJ. M. TILLEY,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 37 years, deponent's residence being in the Hemptown or 1308 district of said county. Deponent is engaged in the business of farming and lumbering, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically

identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have

failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows: Deponent owns, cultivates and resides on a farm in said county and district, located at head of Hampton Valley, about twenty-one miles from defendants' furnaces. During the month of June of 1906 deponent saw watermelon vines after the appearance of the smoke and fumes from defendants' furnaces, on the farm of John Cook, scorched and blistered, and the ragweeds on the farm of R. T. Weaver, in the same condition. The leaves on the blackjack, red oak and hickory trees in deponent's section all scorched, browned and seared, and are falling to the ground as in the late fall after the falling of frost. The damage wrought to timber and vegetation in deponent's section by these fumes is very much greater than ever before. Deponent knows of no other condition in his section which does or could produce the effects mentioned.

J. W. Cook.

Sworn to and subscribed before me, this 5th day of September, 1906.

Thos. A. Brown,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for fifty-one years, deponent's residence being in the Toccoa district of said county. Deponent is engaged in the business of farmer and is a property holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have

been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows, to wit: Deponent owns and cultivates a farm in said district and county, on which he resides, and located about thirteen miles south of defendants' furnaces. Some time in the month of June in this year the smoke and fumes from defendants' furnaces came down on the farm of deponent and that of other farmers in his community, and soon thereafter the corn, beans, leaves on fruit and other trees were scorched, burned, seared and blistered. The peaches have rotted and have been entirely destroyed. The leaves on the timber in deponent's section are now falling to the ground. The damage done to timber and vegetation has been much greater in deponent's section of Fannin county than at any time since the defendants have been operating their plants. The erection by The Tennessee Copper Company of the high stack has had the effect of carrying the smoke and fumes from de- quently has very greatly extended the territory heretofore affected injuriously by these fumes.

S. C. DAVENPORT.

Sworn to and subscribed before me, this 3d day of September, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for forty-five years, deponent's residence being in the Toccoa district of said county. Deponent is engaged in the business of ——— and is a property holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk.

Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it ket truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows: During the month of June of this year the smoke and fumes from defendants' works came down on deponent's farm in great volume and strength, and soon thereafter the bean vines growing on my farm wilted down and had the appearance of having experienced a severe frost. The ragweeds and other tender vegetation were killed summer the timber and vegetation on deponent's farm had been only slightly damaged by the fumes from defendants' in the same manner. Deponent's farm is located about seven miles south of defendants' works. Up until this spring and works. Now the timber on deponent's farm, and as far as deponent can see it, at least one-third of it is damaged. The leaves have turned brown and falling to the ground as in the late fall. The erection of the high stack by The Tennessee Copper Company has only aggravated the trouble.

D. A. McKinney.

Sworn to and subscribed before me, this 30th day of August, 1906.

Thos. A. Brown,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for thirty-eight years, deponent's residence being in the Toccoa district of said county. Deponent is engaged in the business of farmer and is a property holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have

been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer.

Deponent owns, cultivates and resides on a farm in said district and county, located about twelve miles south of the furnaces of defendants. In the month of June of this year the smoke and fumes from said furnaces came down on deponent's farm in great volume and strength, and soon after it cleared away deponent noticed that the ragweeds, bean and pea vines wilted down. About ten days ago the same thing occurred again, producing the same effects.

Since the erection of the high stack by The Tennessee Copper Company, the territory heretofore injuriously affected by said fumes from said furnaces has been very greatly extended. The leaves on the timber this year in deponent's section have been scorched, browned and seared, and are now falling to the ground as in late fall after heavy frost.

W. R. Coneldy.

Sworn to and subscribed before me, this 5th day of September, 1906.

Thos. A. Brown,

Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 29 years, deponent's residence being in the Toccoa district of said county. Deponent is engaged in the business of farmer, and is a property holder in said county, and is tax receiver of said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically

identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have

failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows: Deponent owns and cultivates a farm, situated in said district and county, located about ten miles from defendants' copper furnaces. In the latter part of June, 1906, the smoke and fumes from defendants' furnaces came down on the farm of deponent on the Toccoa river and again and at several days in the first of July following. As soon as the fumes lifted the ragweeds, bean vines and the corn appeared to be frostbitten, and were turned white. The fumes from said furnaces have done more damage to timber and vegetation this year than ever before. The damage done has been greater this year than in four years previously put together, there having been more or less damage done to timber and vegetation for the last four years before this. The leaves on the timber have been browned and seared by these fumes this year, and are now falling to the ground, as in the late fall after frost.

A. L. Jones.

Sworn to and subscribed before me, this 5th day of September, 1906.

Thos. A. Brown,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 55 years, deponent's residence being in the Noontootly district of said county. Deponent is engaged in the business of farmer and is a property holder of said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and sohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case durjng the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profiitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have

been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation: I live at the Wilscot mountain, about twenty-odd miles south of the smelting plant of the Ducktown Copper Company. Since the high smokestack has been erected the fumes of said company is much stronger than before. The timber and vegetables, fruit and cereals that seemed to resist the smoke to some extent, has now for this year (1906) all been more or less affected, and some of them totally destroyed. Corn in this section is nearly a failure. One heavy blast of the smoke swept over this section about the middle of June. Many weeds and much timber dying in a little while. The sides of th ehills and mountains towards the mines now look as if a great part of the timber had been deadened; the leaves are falling, and in many places the ground is covered nearly enough to burn over. Most of the peaches stopped growing about the middle of June, rotted and fell off. The trees are yellow and sickly. Prior to this year the trees were healthy and green. The elements have not been clear, nor the sky blue, this year in this vicinity.

BENJ. M. TILLEY, N. P., J. P.

Sworn to and subscribed before me, this 5th day of September, 1906.

W. A. WILSON,

J. P. and Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 49 years, deponent's residence being in the Caldwell district of said county. Deponent is engaged in the business of farming, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have

been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring summer.

Deponent owns and resides on a farm in Fannin county, located about eight miles southwest of defendants' copper furnaces. The smoke and fumes from these plants for several years past has been observed in the community in which deponent resides in greater or less quantity, doing more or less damage to timber and vegetation. But during the last spring and present summer the smoke and deadly gases and fumes generated by defendants' copper plants have been observed in much greater volume and strength than ever before. The damage done to timber, especially, has been much greater and more noticeable than ever before. On my farm, and within sight thereof, the leaves on the timber have been scorched, browned and seared, and present the appearance of having been frost-bitten, and the leaves are now at the date of this affidavit falling to the ground, as is the case in this country in the months of October and November, after the falling of frost. The damage done in deponent's community this year is two or three times greater than that done in the last two or three years previously put together. The erection of the high stack by the Tennessee Copper company has only served to give the fumes from the copper works greater carrying power and consequently Tennessee Copper Company has only served to give the fumes Deponent has traveled considerably over the county northwest of Blue Ridge, and the same conditions which prevail in my community obtain throughout this section of Fannin county.

M. B. Williamson, Jr.

Sworn to and subscribed before me, this 30th day of August, 1906.

Thos. A. Brown,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for fifty years, deponent's residence being in the Morganton district of said county. Deponent is engaged in the business of farmer and is a property holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have

been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows: Deponent owns, cultivates and resides on a farm in said district and county, located about fifteen miles southeast of defendants' furnaces. Deponent has a small peach orchard on his said farm, and said peach trees were well fruited this season. About the 20th of June, 1906, the smoke and fumes from defendants' furnaces came down on said orchards and peach trees, and within a few days thereafter the leaves on the said peach trees became parched, and the peaches, which had about reached maturity, shriveled up and fell off, and the entire crop was a total loss. A great deal of the leaves on other trees in the forest were affected likewise. The leaves on the timber in deponent's section are now falling off.

T. P. Butts.

Sworn to and subscribed before me, this 10th day of September, 1906.

Thos. A. Brown,

Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 19 years, deponent's residence being in the.... district of said county. Deponent is engaged in the business of farmer and stock trader, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically

identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have

failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer.

Deponent has been engaged for the last two years in the business of cattle inspector for Fannin county, under appointment of the secretary of Agriculture of the State of Georgia. In the performance of his duty as such deponent has traveled almost over the entire county, and has had good opportunity to observe the conditions prevailing in the county for the last two years. Deponent has observed that the extent of the territory of this county affected by the smoke and fumes from defendants' furnaces has been much extended. Deponent this season has noticed the effects of it on the leaves near his home, twenty-five miles from defendants' furnaces, where it was not noticed last year. The leaves on the trees in my section of the county have been browned and seared during this season.

E. W. SHELTON.

Sworn to and subscribed before me, this 10th day of September, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 13 years, deponent's residence being in the 913th district of said county. Deponent is engaged in the business of farming, and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge

of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have

been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation: In one section of said county, which is in Morganton district, deponent owns 217 acres of land, the majority of which is used for farming purposes. The fumes or gas of said smoke has done great injury to the present crops, more so this year than ever before. The effect on the timber in and around said section is visible for miles away. Foliage is as yellow or brown as is usual in October to November.

E. L. PRINCE, M.D.

L. C. Allen, sworn and says he has lived on Toccoa river, fifteen miles southeast of Ducktown twenty years; that he has noticed the effect of the gas or smoke on the timber and farm products, and they are greater this spring and summer than ever before; that they have gradually grew worse all the time. Deponent knows these state of facts from personal observation.

L. C. ALLEN.

Sworn to and subscribed before me, this 18th day of September, 1906.

G. D. NIXON,

J. P. and Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 34 years, deponent's residence being in the 7th district of said county. Deponent is engaged in the business of farming, and is a property-holder in said county.

Deponent is a resident of said State and county, is a property-holder in said county, and is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes, and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character

of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and heretofore two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the or-

chards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been abandoned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation and that at this writing—September. 18th. The damage to timber and vegetables is rapidly on the increase. That deponent has a fine situation and large orchards of peaches and apples that seldom ever failed to produce a profitable crop, even when other nearby orchards would be a total failure. There was a full crop in the spring of 1906, giving promise of an enormous crop till peaches was about one-half grown. The smoke kept settling so dense, and the fumes so strong that they all turned black, and most of them fell off, and the rest just dried up; leaves also looked as though they had been severely frostbitten; would turn yellow and then black and then dry up and fall off, and the appearance now is that many of them will die.

Beans, peas, cabbage, oats and corn is almost a total failure in the immediate locality where deponent lives. Even crab grass, which formerly grew abundantly, is a total failure.

CHARLEY A. SHELL.

Sworn to and subscribed before me, this 18th day of September, 1906.

BENJAMIN M. TILLEY,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for one year, deponent's residence being in the Flint Hill district of said county. Deponent is engaged in the business of principal of Epworth Seminary and is a property-holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or could produce either such haze, vapor, or odor. Deponent has observed this vapor whenever the wind was from defendants' mines. This vapor is denser in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisture. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which re[illegible]d maturity has rotted in the husk.

The smoke and fumes were often present in such volume

and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation:

Deponent further says that he has frequently noticed throughout this and adjoining counties the blighted condition of vegetation and the dead and dying timber, and has no doubt but that the damage has been done entirely by the smoke from the smelters. The school of which deponent is principal is situated about three to four miles from the mines, in a region naturally beautiful and attractive, well wooded and productive, but everywhere about the school property timber has been damaged and farms rendered unprofitable. The situation has become serious to the best interests of the school in two ways: 1st. Several of the patrons have been forced to abandon their homes and farms and seek more profitable locations, thus withdrawing their children from the school; and, second, many families who remain have been financially affected until they are not able to keep their children in school. In addition to these damages deponent has found difficulty in drawing students from a distance, as parents object to sending their childrendren where they think it will be unhealthy. The seminary is situated on an eminence and from deponent's office windows the timber presents the appearance of having been frostbitten, showing brown and seared.

MILTON R. EASTLOCK.

We, the undersigned, assistant teachers of Epworth Seminary, have read the above affidavit and know the facts stated therein to be true.

C. E. CLEMENT,
DORA A. WILLINGHAM,
SUSAN H. BRECK.

Sworn to and subscribed before me, this 29th day of August, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared the undersigned who, being duly sworn in the above-entitled cause, deposes and says:

Deponent is a resident of said State and county, and has been for 25 years, deponent's residence being in the Sugar Creek district of said county. Deponent is engaged in the business of Farmer and is a property holder in said county.

Deponent is familiar with farming conditions, timber interests, farms, lands, orchards and forests throughout his locality, and is also familiar with the location of defendants' furnaces.

Within the past two or three years the furnaces of defendants have been smelting large quantities of sulphurous copper ore. This process of smelting throws off what appears to the eye to be a gray haze or vapor. It is perceptible to the eyes and has a deleterious effect upon them. It likewise possesses a peculiar odor, which is foul and exceedingly offensive. It is different from anything which deponent has ever experienced.

The color, the haze, the effect upon the eyes, the character of the odor, its peculiar unpleasant effect, all serve to physically identify beyond a question the vapor of fumes which are discharged from the furnaces of the defendants.

There is not in any section of said county, to the knowledge of any of deponents, any mercantile or manufacturing enterprise or natural condition of affairs which ever has, does, or observed this vapor whenever the wind was from defendants' mines. This vapor is dense in character and has a tendency to settle toward the earth, and especially when the air is dense or heavy with moisure. The odor, color and cohesiveness of the mist or haze is greater upon such occasions than when the air is clear, bright and dry.

The settling of this mist or vapor is not a thing which occasionally occurs during the year. It has within the past two or three years been a matter of repeated occurrence. This vapor has been generally noticed by the citizens and residents, and has caused extensive comment.

This has been particularly the case during the past spring and summer of 1906. The smoke has been noticeable much more frequently than theretofore, and was present in greater volume and strength than theretofore observed. In addition, while previously the smoke and fumes were usually apparent only late in the afternoon, at night and in the early morning, during the last few months the fumes and vapors were at times present during all hours of the day and night.

Much of the county in which deponent resides is devoted to agricultural purposes, and, heretofore, two crops per year throughout said section were harvested, the winter-growing farm crops consisting mainly of wheat, rye, barley and small grain generally, and the market or garden truck of turnips, collards, mustard and the like. The farms, prior to the appearance of the fumes and vapors before mentioned, were, as a rule, profitable, and were cultivated from year to year, and were generally in a good condition.

The timber interests in the section of Georgia in which deponent is located are exceedingly large and valuable. Among the species of trees found are white pine, spruce, yellow pine, hemlock, white oak, chestnut oak, chestnut, hickory and other varieties, the white pine, spruce, yellow pine and hemlock being in leaf through the winter.

Since the appearance of said fumes the conditions of the orchards, forests and farms have changed. Large quantities of timber have died, orchards have been destroyed, crops have failed, and grain which reached maturity has rotted in the husk. Some species of timber, such as hickory and chestnut oak, have been practically exterminated, and many farms have been aban-

doned to wild lands or allowed forfeited for non-payment of taxes.

The destruction of timber, crops, gardens and orchards has been greater during the past (1906) spring and summer than ever before, and the region subject thereto much enlarged.

The smoke and fumes were often present in such volume and strength that immediately after their appearance the vegetation seemed scorched and blistered, and looked as though it had experienced a severe frost. Often growing crops or market truck was killed in a single night.

This has been especially the case during the past spring and summer. Among the instances coming directly under the deponent's observation are as follows: Deponent owns, cultivates and resides on a farm about six miles from the furnaces of defendants. On the 31st day of August, 1906, the fumes from these furnaces came down on the farm of deponent in great volume and strength. The fumes on this occasion scorched, blistered, killed the ragweeds, pea and bean vines, and soon they presented the appearance of having been frostbitten, though no frost had fallen. The fumes from their furnaces have made their appearance for several years in this county, but never so often, and in such volume and strength until during this spring and summer. The leaves on the timber in nearly every section of Fannin county have this year been scorched and browned, and they are now falling in great quantities, as is usual in late fall after frost. The erection of the high stack by The Tennessee Copper Company has made the situation much worse this year than ever before since the defendants have been operating their mines.

T. W. WRIGHT.

Sworn to and subscribed before me, this 6th day of September, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Gilmer.

Personally appeared Sherman Martin who, first being duly sworn in the above-styled and numbered cause, deposes and says:

That he is forty-nine years of age, farmer and laborer by occupation. Has recently been in the employe of The Tennessee Copper Company at their mines and works in Polk county, Tennessee.

Deponent has read the minutes of a mass-meeting of so-called Georgia citizens, reported to have been held at Harpertown Storehouse, in Fannin county, Georgia, February 3, 1906, called to consider the litigation between the State of Georgia and The Tennessee Copper Company, and from the same it would appear that this deponent had attended this meeting and gave permission for his name to be signed thereto.

Deponent states that at the time this meeting was reported to have been held, that he was at work for The Tennessee Copper Company in their mines under ground, and did not attend said meeting, sign said minutes, or give permission to any one to sign same in his name, or in his stead.

Deponent further states that he is the owner of forty acres of land in Polk county, Tennessee, on which was located at one time a fine, healthy orchard, but same has long since been killed and utterly ruined by the fumes from the copper plants in Polk county, Tennessee, and the ground ruined, so as to be unfit for cultivation.

Deponent further states that he has worked for the above mines off and on for something like ten years, but that he can not stand the gases, fumes and smoke that are generated at this plant for any length of time, and that he is compelled, on account of his health, to give up a job there to seek work in a more healthy climate at even less wages than he can obtain by working for the copper companies in Tennessee. That he is now living in Georgia on this account.

Deponent has read the list of names attached to the said petition above referred to, and while he does not know all the names that appear thereon, he has recognized 158 of the same as appear hereafter as either being employed, directly or indirectly, by either one of the two companies above referred to in their mines, stores, trains or works in Polk county, Tennessee, either at the time or date of this petition, or shortly before or thereafter.

Deponent was advised when in the employ of the above company and at the time this above meeting was held, that the company desired all of its employees who lived in Georgia to attend this meeting, and they were told that they would be allowed full time to do so, and that they would not be docked for any loss of time while attending same.

The names signed to said petition above referred to are as follows:

A. J. Stone.
J. A. Caylor.
O. S. Poe.
O. F. Mitchell.
S. B. Thomas.
W. L. Copper.
Jas. Hawkins.
John Fuller.
S. Bennett.
Arch Ballew.
G. D. Tankersley.
Joseph Owens.
J. C. Turner.
W. M. Webb.
S. E. Jones.
W. L. Scroggs.
W. H. Robinson.
J. B. Ricketts.
J. W. Miller.
N. T. Phillips.
J. P. Baker.
W. P. Key.
R. A. Culberson.
W. A. Welch.
L. L. Tilley.
C. L. Parris.
W. W. Thrasher.
G. W. Falls.
J. H. Drennen.
B. H. Dooley.
E. P. Galloway.
W. A. Frazier.
Jas. Harper.
J. Nix.
J. N. Peeples.
Wm. Mitchell.
Sherman Martin.
J. E. Caylor.
J. M. Bell.
H. G. Ledford.

J. M. Stone.
M. E. Colwell.
W. P. Walker.
J. M. Falls.
Wm. Garren.
F. M. Williams.
B. B. Bearden.
N. G. Golden.
J. E. Fulbright.
J. H. Mull.
J. O. Rider.
T. B Turner.
W. L. Shope.
J. E. Wilson.
W. M. Self.
C. C. Andrews.
J. A. White.
H. B. Ross.
W. D. Hawkins.
F. L. Harper.
J. D Beavers.
A. Arp.
J. W. Stanley.
Chas. Jones.
M. H. Bennett.
John McFarland.
W. M. Stewman.
D. R. Paine.
L. R Woody.
W. H. Anderson.
C. W. Jones
L. B. Patterson.
J. L. Williams.
G. D. Angel.
J. C. Bonner.
J. C. Davenport.
J. A. Hampton.
J. B. Wittenburger
G. W. Self.
J. R. Harper.

W. C. Tanner.
W. McFarland.
N. D. Parris.
E. W. Howell.
A. B. Smith.
E. L. Gurley.
S. M. Falls.
W. G. White.
H. A. Shelton.
A. M. Johnson.
R. M. Caylor.
J. M. Withrow.
W. H. Evans.
J. R. Tankersley.
W. P. Thomas.
J. E. Green.
Wm. Dillards.
J. J. Jones.
Herbert Weese.
C. C. Vellenoweth.
O. P. Tilley.
H. F. Scruggs.
M. McFarland.
J. H. Shelton.
A. J. Brown.
J. E. Adams.
H. C. Parris.
J. N. Hughes.
E. F. Hughes.
L. I. Tilley.
A. J. Baker.
R. J. Cook.
E. M. Flowers.
W. S. Sisson.
H. Roberts.
H. C. Paine.
Burt Bailey.
J. A. Corlis.
W. C. Garren.

W.W. Fulbright.
J. W. Wright.
F. Ellis.
John Jones.
D. M. Weeks.
J. W. Robinson.
A. C. Cook.
J. C. Baker.
J. P. Ellis.
L. C. Bonner.
J. J. Withrow.
J. N. Standridge.
J. B. Green.
H. R Woody.
L. C. Turner.
W. H. White.
A. N. Long.
E. W. Chapman.
J. M. Garren.
B. H. Waldon.
S. H. Dean.
J. T. Fry.
A. D. Angel.
J. F. Brown.
Jas. Pitman.
H. F. Williams.
L. C. Henson.
T. J. Talley.
H. J. Dupree.
J. T. Dickey.
C. J. Watson.
H. M. Craig.
F. T. Sargent.
W. G. Fry.
J. R. Poe.
J. C. Bowers.
D. D. Weaver.
John Davis.
J. J. Groves.

SHERMAN MARTIN.

Sworn to and subscribed before me, this 12th day of April, 1906.

W. T. PICKETT,
Notary Public, Gilmer county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared before me J. A. Tipton, a notary public in and for said county, an officer of said State duly authorized to administer oaths, C. C. Andrews who, after being duly sworn, deposes and says on oath, in relation to the above-styled and numbered cast, as follows, to wit:

Deponent was present at and signed a petition and certain resolutions passed at what purported to be a mass-meeting held at Harper's store, near McCay, Tenn., to protest against the further prosecution of the suit of the State of Georgia against the copper companies at Ducktown, Tenn., now pending in the Supreme Court of the United States.

There were no farmers, and only a few merchants, doing business at or near McCay, present at said meet. Fully 19/20 of the persons who attended said meeting and signed the resolutions were employees of the two defendant companies, largely of The Tennessee Copper Company, many of who[illegible]re not residents of Georgia—persons, in fact, who have no fixed residence anywhere. The employees of this last-named company

were instructed and required by the several foremen of the company to be on hand at said meeting.

C. C. ANDREWS.

Sworn to and subscribed before me, this April 14th, 1906.

J. A. TIPTON,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared before the undersigned, a notary public in and for said county, an officer of said State duly authorized to administer oaths, J. A. Tipton who, after being duly sworn, deposes and says, on oath, in relation to the above-styled and stated case as follows, to wit:

Deponent is a citizen of said county, and was one of the persons attending a mass-meeting held at Harper's store, near McCay, Tenn., for the purpose of petitioning the Governor and Attorney-General of this State not to prosecute further the suit of the State of Georgia, by its Attorney-General, John

C. Hart, against The Tennessee Copper Company and The Ducktown Sulphur, Copper and Iron Company (Limited), now pending in the Supreme Court of the United States. Deponent signed the petition and resolutions passed at said meeting, and afterwards sent to the said Governor and Attorney-General of this State.

Deponent resides at McCay, Tenn., and is very familiar with the works of the defendant companies, and knows many of the employees of the said companies, and especially the employees of The Tennessee Copper Company. Deponent says that more than nineteen-twentieths of the persons who attended said mass-meeting and signed said petition and resolutions were employees of The Tennessee Copper Company, and of the other defendant company, practically all of them being employees of the first-mentioned company. There was not a farmer present at said meeting who signed said petition or resolutions. There were several merchants who are doing business at and near McCay present, who took part in the meeting. Deponent saw the employees of The Tennessee Copper Company coming to the place where said meeting was held in crowds and droves, they being easily distinguishable by the fact that they had on overalls and jumpers, and were coming directly from the copper company's works, and after the meeting was over returned to the works of the said Tennessee Copper Company. There were not more than one dozen, or fifteen persons on the ground before these employees came, and not more than this number left after said employees had retired. Many of these employees who attended this meeting are, in the opinion of deponent, not residents of Georgia, or Fannin county. There were more persons as employees of said companies present than resided on the Georgia side of the State line.

Deponent says further that the petition and resolutions which the committee, appointed at said meeting by the chairman, reported, were typewritten and not prepared by said committee, but were prepared before the time said mass-meeting met.

Deponent further says that he had a conversation with one of the employees of The Tennessee Copper Company who was present at said meeting, who informed this deponent that the foremen of The Tennessee Copper Company had notified all the employees of the company the evening preceding said mass-meeting, that all the employees of said company were expected

by the company to be present and on hand at said meeting to be held next day at Harper's store. Deponent says that the greater number of said employees of said company who attended said mass-meeting are persons who have no permanent residence or citizenship anywhere, for the reason they reside at no one place long enough to obtain either. Affiant makes this statement under oath, after he has made a careful examination of the names of the persons who signed said petition and resolution, and is based upon the further fact that he is well acquainted with most of those whose names appear signed thereto.

J. A. TIPTON.

Sworn to and subscribed to before me, this April 14th, 1906.

THOS. A. BROWN,
Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared before the undersigned, a notary public in and for said county and State, duly authorized to administer oaths, W. A. Daves who, after being duly sworn in the above-

styled and numbered cause, deposed and says, in relation to said cause: That affiant is the present ordinary of the county of Fannin, State of Georgia, and as such officer he has in his custody and control the tax-digest for said county for the year 1905, and that the same is now of file in his office in the city of Blue Ridge, in said county.

Affiant further says that he has examined the list of names signed to a certain petition addressed to the Governor and Attorney-General of the State of Georgia, which petition undertook to inform said State officials that the people of Fannin county were opposed to the State of Georgia interfering in any way with the present operation of the above-stated copper companies, and which said petition purports to have been signed by residents of said county at a mass-meeting held at Harper's store, near McCay, Tenn., and that he has compared the names appearing on said petition with the names of persons appearing on the said tax-digest for the year 1905, and now of file in the office of the ordinary of the county of Fannin. Affiant made a careful examination of said names appearing on said petition and of those appearing on said tax-digest, and a very careful comparison of the names appearing upon each, and that he is able to state the exact result of said examination and comparison.

Affiant further says that of the names appearing on said petition, the following do not appear on said tax-digest for the year 1905, either as poll or property taxpayers of said county of Fannin, to wit:

H. N. Corliss, A. J. Stone, J. A. Caylor, W. G. Smith, O. S. Poe, S. B. Thomas, W. L. Cooper, S. Jones, S. Bennett, Arch. Ballew, G. D. Tanklersley, Jas. Owen, J. C. Turner, W. M. Webb, S. E. Jones, W. L. Scroggs, J. B. Ricketts, W. Miller, N. T. Phillips, M. E. Caldwell, W. P. Walker, J. H. Burns, Wm. Garron, J. D. Thomason, B. B. Bearden, N. G. Golden, A. F. Burns, M. L. Burns, J. E. Fulbright, J. H. Mull, J. O. Rider, T. B. Turner, J. M. Carr, C. G. Smith, W. M. Self, Jeff. A. Hedden, E. Block, C. C. Andrews, J. A. White, G. W. Guy, W. McFarland, E. W. Howell, E. B. Tabor, A. B. Smith, E. L. Gurley, W. G. White, H. A. Shelton, G. C. Bailey, Andrew Hill, A. M. Johnson, R. M. Caylor, W. H. Smith, W. H. Evans, F. E. Evans, Wm. Dillards, J. J. Jones, Herbert Weese, C. C. Vallenoweth, J. W. Wright, M. D. Richards, F. Ellis, John Jones, W. T. Mahaferty, O. D. Elrod, D. B. Bollins, J. H. Baldridge, J. W. Robinson, J. H. Brock, L. C. Cook, G. C.

Baker, J. P. Ellis, O. M. Baldridge, L. C. Bonner, R. L. Cochran, J. N. Standridge, J. B. Green, F. M. Parris, L. C. Turner, W. H. White, A. N. Long, J. P. Baker, T. B. Cole, W. P. Key, R. A. Culberson, L. L. Tilley, C. L. Parris (who was a member of the committee on resolutions at said meeting), H. L. Collector, G. W. Falls, W. A. Smith, R. L. Kell, S. S. Frady, J. H. Drennon, B. H. Dooly, G. W. Jones, E. P. Galloway, W. F. Frazier, J. J. Nix, J. N. Peebles, J. A. Keenon, Sherman Martin, J. H. Kisselburg, J. E. Caylor, J. M. Bell, J. W. Fortner, H. G. Ledford, J. L. Ledford, G. W. Stevens, W. B. Coppage, A. Arp, Charles Jones, H. M. Bramblet, John McFarland, W. G. Woody, J. E. Garron, W. J. Wood, F. W. Jarrard, W. N. Stewman, J. H. Farmer, D. R. Payne, L. A. Woody, J. C. Standridge, J. H. Cook, C. W. Jones, L. B. Patterson, J. L. Williams, G. D. Angel, J. C. Bonner, G. E. Crawford, H. N. Ashe, R. A. Burns, C. C. Davenport, W. A. Williams, W. M. Harris, J. M. Chauncey, A. M. White, J. B. Whittenberger, G. W. Self, W. C. Tanner, G. Standridge, O. P. Tilley, H. F. Scroggs, L. Walker, T. L. Campbell, M. McFarland, T. H. Lively, I. D. Jenson, W. W. Mitchell, D. L. Parris, W. A. Curtis, E. M. Cagle, D. C. Allison, D. W. Painter, A. J. Brown, J. N. Hughes, E. F. Hughes, B. B. Anderson, L. I. Tilley, L. B. Parris, A. J. Kell, J. F. Kell, J. F. Curtis, A. J. Barker, J. N. Parker, R. J. Cook, J. G. Woody, Geo. E. Keith, J. H. Pulliam, James Gates, W. T. Elrod, E. M. Flowers, W. S. Sisson, H. Roberts, H. G. Payne, Joe Harbin, R. A. Nalor, Burt Bailey, J. A. Corliss, B. A. Corliss, M. V. Kell, G. C. Dooly, W. C. Garron, B. H. Waldon, H. C. Baker, John Smith, J. T. Frye, J. F. Justice, A. D. Angel, J. F. Brown, Jas. Pittman, H. F. Williams, M. Gates, Geo. Elrod, L. C. Henson, T. J. Talley, H. J. DuPree, Walter Lilley, John Conrad, R. H. Garrett, W. W. Painter, C. J. Watson, L. H. Tilley, W. M. Dooly, J. S. Mathews, F. T. Sawgent, W. C. Frye, L. Beliles, C. W. Ballew, R. L. Standridge, W. S. Thomas, Roland Pope, L. J. Elrod, J. R. Poe, O. U. Langston, J. C. Bowers, D. D. Beaver, John Davis, W. H. Sisson, G. C. Hughes, J. J. Groves and J. M. Stone, the same constituting in number, on said petition and not on said digest, two hundred and twenty-five names.

W. A. Daves.

Sworn to and subscribed before me, this 3d day of April, 1906.

Thos. A. Brown,
Notary Public, Fannin county, Georgia.

X

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

In person appeared before the undersigned, an officer of said State, duly authorized to administer oaths, Thos. A. Brown who, after being duly sworn, deposes and says on oath: That he had a conversation with Gus. Smith, B. B. Bennett and W. A. Calhoun in relation to their names appearing to an affidavit signed by 125 persons claiming to be residents of Fannin county, as it appears published in the argument, brief and exhibits of Tennessee Copper Company, on pages 114, 115, 116 and 117, filed by defendants' attorney in the above-styled and numbered case, and that affiant read said published affidavit to Bennett and Calhoun, and stated from memory the substance of the same to Smith, and asked each of them if they, or either of them, signed or authorized their names signed to the said published affidavit. Each of them stated that they did not, but did authorize their names signed to an affidavit for the company on or about the eleventh day of November, 1905, but not to one like the one read to them. The affidavit which G. G. Hyatt, notary public, read to them, was a statement that the smoke from the defendant companies' furnaces had not injured vegetation and timber for a distance of seventy miles, but for a

distance of only about seven or eight miles from them, and that in their opinion the public roads had not been injured by it. These parties in said conversation further stated that they had authorized no one to sign their names to a statement that there was no lands in Fannin county adapted to argiculture, or that there was no other market except that afforded by the defendants for produce or labor within a distance of fifty miles of the defendants' plants. Deponent asked them to make affidavit as to these statements and they refused to do so. Smith and Bennett stated that some twenty-five other persons signed the affidavit as read to them at the same time as themselves, and under the same circumstances.

THOS. A. BROWN.

Sworn to and subscribed before me, this January 29, 1906.
J. R. KINCAID,
Clerk of the superior court, Fannin county, Ga.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Fannin.

Personally appeared before the undersigned, a notary public in and for said State and county, A. S. Jones who, after being

duly sworn, deposes and says on oath, in relation to the above-stated case, that he is one of the persons whose name is signed to an affidavit purporting to have been made before G. G. Hyatt, a notary public for Polk county, Tennessee, on the eleventh day of November, 1905, and 124 other persons, a copy of which affidavit has been read to him as the same appears on pages 114, 115, 116 and 117 of the "argument, brief and exhibits of Tennessee Copper Company on application of plaintiff for preliminary restraining order," filed by Howard Cornick and John H. Frantz, attorneys for Tennessee Copper Company, and Martin H. Vogel, of counsel.

Affiant further deposes and says that no such affidavit containing the statements which appear in said published affidavit was ever read over to him, or the other some fifty or seventy-five employees of The Tennessee Copper Company, who were present and signed, as we thought, the affidavit which was read to them on or about the eleventh day of November, 1905, nor did he sign or authorize any one else to sign his name to any affidavit for the defendant companies which contained the statements which appear in said filed and published affidavit.

Affiant further says that the person who read to him and the other persons who signed an affidavit in his presence was John Rollins, and not G. G. Hyatt, notary public for Polk county. This man Hyatt, whose name is signed to this affidavit as a notary public, is an attorney at law who represents The Tennessee Copper Company, locally. The person who pretended to read to us the affidavit which it was desired that we sign, instead of reading to affiant and the other persons who were at the same time asked to sign it, did not read an affidavit like the one filed and published, but read an entirely different one. The affidavit as read to me and others was to the effect that the fumes from defendants' furnaces had not, as alleged in the suit of the State of Georgia against the defendant companies, injured, damaged or killed vegetation and timber to a distance of seventy miles from the furnaces of defendant, but only for a distance of seven or eight miles from them, and that the public roads had not been injured by the fumes. This was the sort of an affidavit which deponent thought he was signing, and not one which stated in substance that there was no land in Fannin county adapted to agriculture or market for labor or produce within fifty miles of the defendants' copper plants. Affiant is a deputy sheriff in Fannin county, and was at the

time said affidavit was misread to deponent, in the employ of The Tennessee Copper Company, as were all the other persons whose names are signed to said published affidavit.

A. S. JONES.

Sworn to and subscribed before me, this January 29, 1906.

THOS. A. BROWN,

Notary Public, Fannin county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Union.

Personally appeared before me the undersigned authority, W. L. Bowling, who being first duly sworn herein on his oath did say: That he is a United States deputy marshal, and a resident of Union county, State of Georgia; that on the eleventh day of November, 1905, the following named persons were charged with having violated the internal revenue laws in said county, to wit: T. C. Helton, J. A. Thomason and M. Voiles.

Further, that said named persons were not on the eleventh

day of November, 1905, in said county of Union, being then fugitives from justice.

W. L. BOWLING.

Subscribed and sworn to before me, this 31st day of March, 1906.

W. E. CANDLER,
Notary Public, Union county, Georgia.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA—County of Towns.

Personally appeared before the undersigned authority W. J. Burrell who, being first duly sworn herein, on his oath did say: That he is a resident of Towns county, State of Georgia, and is sheriff of said county; that about fifteen years ago a man by the name of Anderson came to Towns county and remained there a few months, but that since that time there has been no one residing in said county by the name of J. M. Anderson or W. A. Anderson; that during the past twelve or fifteen years there has never been a resident of said county by the

name of John Blarey; that there is no one residing in said county by the name of T. C. Ramey, but that formerly there was a party by the name of T. C. Ramsey in said county, and that this deponent has held two State warrants for said T. C. Ramsey for the past four years, and that during that time said Ramsey has remained outside the jurisdiction of the State of Georgia. Further, that this deponent now has in his possession a warrant for J. L. Coffey, issued upon a charge of assault with intent to murder, and that said J. L. Coffey has not been in Towns county, State of Georgia, to the knowledge of this deponent, during the past two or three years. That during the past twelve or fifteen years there has been no resident of said county named J. B. Amey; there has, however, been a resident of said county named J. B. Ramey, and this deponent says that he has four warrants for the arrest of J. B. Ramey, and that said Ramey, to the knowledge of this deponent, has not been in Towns county during the past four years.

Further, that there is no resident of Towns county by the name of J. M. Barnes; that heretofore there was a man named J. M. Barnes living in said county, but that he left the county two or three years ago to avoid service of a State warrant.

Further this deponent says that he knows C. J. Carroll and Carl Carroll; that they are men of small means, and that during the past four or five years they have spent only a small amount of time in Towns county.

W. J. Burrell.

Subscribed and sworn to before me, this 5th day of April, 1906.

John H. Davis,
Notary Public, Towns county, Georgia.

My commission expires on 28th March, 1907.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

In Equity.

STATE OF GEORGIA—County of Towns:

Personally appeared before the undersigned authority J. B. Johnson who, being first duly sworn herein, on his oath did say: That he is a United States deputy marshal, and a resident of Towns county, State of Georgia, and has resided in said county continuously for more than ten years; that during his residence in said county there has been no one living in that county by the name of John Blarey; that the only person by the name of J. M. Barnes, who ever resided in said county, moved away more than two years ago, and has not returned since that time; that during the past ten years there never has been any person residing in Towns county named D. M. Anderson or W. A. Anderson; that the United States marshal for the past few years has held warrants for the arrest of the only person who ever resided in that county by the name of A. Y. Hooper, and that said A. Y. Hooper was sentenced to the Federal Prison in Atlanta last spring for violation of the internal revenue laws. Further, there is no resident of said county named J. B. Amey; that heretofore there was a resident of said county named J. B. Ramey, and that the United States marshal has for the past two years held warrants for the arrest of said J. B. Ramey; that

during the past ten years there has been several warrants issued for J. W. Ferguson, and that during the greater part of said time J. W. Ferguson has either been serving sentence in Federal prison, or residing outside of Towns county.

Subscribed and sworn to before me, this 4th day of April, 1906.

J. B. JOHNSON.

JOHN H. DAVIS,

Notary Public. Towns county, Georgia.

My commission expires March 28, 1907.

In the Supreme Court of the United States

October Term, 1906

THE STATE OF GEORGIA, BY ITS ATTORNEY-GENERAL, JOHN C. HART,
Plaintiff,

vs.

THE TENNESSEE COPPER COMPANY AND THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED),
Defendants.

} In Equity.

STATE OF GEORGIA—County of Union.

Personally appeared before me the undersigned authority, S. A. Pless who, being first duly sworn herein on oath, did says: That he is a resident of Union county, State of Georgia, and is sheriff of said county. That there was no one by the name of J. T. Dyre residing in said county of Union on the eleventh day of November, 1905, nor at any time since that

date. That there has been a resident of said county named J. F. Dyre, and that said Dyre was heretofore indicted for violating a State law, and is now outside the jurisdiction of the State of Georgia.

S. A. PLESS.

Subscribed and sworn to before me, this 31st day of March, 6.

W. E. CANDLER,
Notary Public, Union county, Georgia.

FILED
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IN THE

Supreme Court of the United States

OCTOBER TERM, 1906

No. 6 ORIGINAL CAUSE IN EQUITY

THE STATE OF GEORGIA, BY ITS ATTORNEY GENERAL, JOHN C. HART, *Plaintiff*

vs.

THE TENNESSEE COPPER COMPANY, AND THE DUCKTOWN SULPHUR, COPPER & IRON COMPANY, LIMITED, *Defendants*

Supplemental Affidavits Filed by Leave of the Court in Support of Argument of Defendant Tennessee Copper Company on Application of Plaintiff for Preliminary Restraining Order.

VOLUME I.

MARTIN H. VOGEL,
Of Counsel

HOWARD CORNICK,
JOHN H. FRANTZ,
Attorneys for Tennessee Copper Company

S. B. NEWMAN & CO., KNOXVILLE.

Affidavit of John M. Clancy.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF KENTUCKY, }
Jefferson County. }

Personally appeared before me the undersigned authority, a Notary Public in and for said County, John M. Clancy, who being first duly sworn on his oath herein, did say:

Affiant is a forester by profession and under the direction of Dr. C. A. Schenck, at the instance of the Tennessee Copper Company went to the northern part of Georgia in the month of August, 1906 for the purpose of making investigation of the conditions prevailing in that territory of the foliage, forests and farm lands. The time consumed in actual field work on the ground was from August 2nd, 1906, to August 17th, 1906, inclusive. The territory covered and traversed by affiant was that territory in the northern part of Georgia within a radius approximately of thirty-five miles from Ducktown Copper works in all directions within the State of Georgia, having gone over this entire territory in various directions and routes. These routes traversed the entire territory to such an extent that practically all of the territory alleged by the plaintiff to be affected was seen and examined.

The territory under discussion is mountainous and hilly.

The population is very sparse and scattered. The soil is thin and decidedly poor. The region is not an agricultural region, and with the exception of small farms scattered throughout the district, little or no effort is made toward agricultural pursuits. The timber for a distance of from 12 to 14 miles south of the Ducktown Copper works is of short, scrubby growth, consisting mainly of black jack, white, post, scarlet, Spanish and red oaks, with the black and black jack oaks, which are not of a merchantable size and quality, predominating by a great majority.

Outside of this territory for a radius of from 25 to 30 miles south of the Ducktown works, there are a few scattering trees of merchantable size and quality, but even with these trees and woodlands are of such character and merchantable timber is of such scarcity that logging and lumbering operations can not be pursued with profit. As a rule the timber of the entire region is suitable for firewood only. The sole market for fire wood in that region is in and around the copper works. Aside from the market at the copper works, there is no market except a few scattering hamlets throughout that region. It is well to note at this point that there is no market for farm produce excepting among the laborers of the smelting works, and a few scattering hamlets.

It was a most noticeable fact that the whole of this region has and is suffering from the ravages of forest fires which annually run over the ground unrestricted. These fires besides killing outright the underbrush and young growth of the forest, thus effectually preventing reproduction, scar and crack open the bark and sapwood of saplings, poles and larger trees, offering in this way vulnerable points of attack for insects and fungus diseases.

Forest fires are usually started intentionally by the natives with the object of improving the pasturage, and in instances for gathering chestnuts which have fallen from the trees. As a result of the fires the pasturage is improved and as a result of the pastur-

age woodlands are further injured by the browsing animals eating such young sprouts of trees as may have escaped the fires.

So far as this affiant knows, there are neither stock laws, fence laws nor fire laws applying to the counties investigated. If such laws exist they certainly seem to be wholly disregarded.

From affiant's experience in timber inspections and examinations of forest lands, the forests of the region examined have little or no commercial value whatever for woodlands aside from such value as is given them by the market afforded at Ducktown Copper works for the sale of fire wood.

Particular investigation and inquiry was made throughout this trip by affiant with respect to the possible injury by sulphur fumes to the pasturage, and it was not only the opinion of this affiant, but was the opinion of the majority of the natives of this region that the pasturage was in no wise injured from the operations of the smelting plant of the copper works.

In the course of affiant's traveling through this territory, he met and interviewed many of the natives about the condition of the foliage, woodlands, pasturage and farmlands and it was the exception that he heard any one of them complain about the condition of the foliage or farmlands and woodlands, as most of them in no way made any complaint whatsoever about the operation of the Copper Companies. And those few who did claim that such damages were being done by the operations of the Copper Companies, stated that it would be better for them and the neighborhood generally for the Copper Companies to continue than to have them shut down, as they gave them a market for their goods, and in addition furnished labor for those members of the community, who would otherwise be compelled to eke but a scanty existence by farming poor lands. This affiant sought for complaining natives and in every instance made personal examination of alleged

injury from the Copper Company's smoke, and in most instances these investigations were made in company with the owners of the lands on which alleged injury occurred, and it was invariably found upon investigation, that in such instances where natives claimed that trees had been killed by sulphur fumes, such trees were infested with bark beetles of a species known to have killed large tracts of timber, in many timber districts throughout the United States. Some of the natives agreed with affiant that death of the timber was due to insects and not smoke.

It was noted by affiant that throughout the region a large majority of the white pines, which comprised much less than one per cent of the stand of timber were in a dead and dying condition, and such of the natives who made any complaint attributed this condition to the action of the sulphur fumes, from the copper works.

In examining these injuries to the white pine, affiant found that their death or injuries were being caused by an insect, and in every instance where the white pines were found dead, it was found that they had been infested by Dendroctonus frontalis, the chief insect enemy of pine species of the United States. As far as this affiant could ascertain the death of the white pine in this region has been confined to the years 1905-1906. It is worthy of note that in other parts of the Southern Appalachian System and in parts of New England, this same death rate of white pine is occurring this year, and in the opinion of several authorities, the death of these white pines is due to a fungus disease, the nature of which is not thoroughly known at present.

It was noted upon examination that yellow pine throughout the district examined were for the most part green and apparently healthy. In the instances where dead yellow pines were found, it was invariably found upon examination, that these pines had been infested by Dendroctonus frontalis, and that death was with-

out a doubt due to these insects. In almost all instances of the death of these yellow pines the natives attributed it to the influence of smoke, some of the natives attributed the injury to smoke, while others admitted that the death of the pines was due to insects.

Stag-headed trees were found throughout this territory, but the average number of them were no greater than in other parts of the Southern Appalachian range. Some of the natives claim that these stag-headed trees were due to the fumes from the smelting works. This is a wrong assumption, and is in no way ascribable to the sulphur fumes. A stag-headed tree is a tree which has reached maturity and whose vitality is beginning to wane. In following up the few complaints of the natives, affiant found that in every instance the death of the trees was due to insects. This was borne out by repeated painstaking examinations.

JOHN M. CLANCY.

Sworn to and subscribed before me this the 24th day of September, 1906.

[SEAL]

C. J. MEDDIS,
Notary Public.

Affidavit of Arthur H. Case.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Knox County.

Personally appeared before me the undersigned authority, Arthur H. Case, who being first duly sworn herein, on his oath did say:

Affiant is a citizen and resident of Polk County, and is in the employ of the Tennessee Copper Company. Affiant is a photographer and made and developed the photographs taken by Walter J. Mosenthal and John M. Clancy between the dates of May 28th, 1906, and June 7th, 1906, and also the photographs taken by this affiant and Walter J. Mosenthal between the dates of August 28th and September 5th, 1906, which photographs are filed consecutively as exhibits to this affidavit in two series, as follows:

(a) The photographs taken in May and June, 1906, are numbered consecutively A.1. to A.53., inclusive. These photographs are marked upon their face June, 1906, with the identification exhibit number also marked.

(b) The photographs taken in August and September above mentioned are marked upon their face as B.1. to B.53., inclusive, and are marked Aug., 06, with the exhibit number, and it is the intention to so arrange these photographs that a fair comparison may be shown of conditions existing between May

28th and June 7th, 1906, and conditions existing between August 28th and September 5th, 1906.

(c) There are also filed a number of photographs as exhibits to this affidavit, all of which photographs were taken and developed by this affiant, numbered consecutively C.1. to C.28., inclusive. These photographs are taken of objects which were not covered by affiant's tour of May, 1906, they were taken in August and September, 1906, and are marked August with exhibit number, and are filed as exhibits for the purpose of showing views of the foliage as it existed at those points during the latter part of August and first of September, 1906, and are therefore not a part of the set of comparative photographs.

Affiant states that the photographs taken were not taken with the view of showing a minimum amount of injury, but all of photographs series A and B were taken solely for the purpose of having a basis of comparison and truthfully represent the comparative conditions existing in the Spring of 1906 with the conditions existing in the late Summer and early Fall of 1906.

The photographs, series C, are taken for the purpose of making a fair representation of the conditions existing in the woodlands where the photographs were taken.

A.1.—B.1. Yellow Pine, 14 miles from smelter on banks of Ocoee River. No change in condition. Healthy.

A.2.—B.2. Sycamore, 13 miles from smelter, on banks of Ocoee River. Perfectly healthy. No change.

A.3.—B.3. Hickory, 12 miles from smelter. Perfectly healthy. No change.

A.4.—B.4. White oak, 12 miles from smelter, banks Ocoee River. Healthy. No change.

A.5.—B.5. Small walnut, 11 miles from smelter. Healthy. No change.

A.6.—B.6. Chestnut sprout, 10½ miles from smelter. Healthy. No change.

A.7.—B.7. Small maple, 9 miles from smelter. Healthy. No change.

A.8.—B.8. Pinus virginiana, 6 miles from smelter. Healthy. No change. Some discoloration found to be due on examination to beetles.

A.9.—B.9. Pine, 7 miles from smelter near Ocoee River. Healthy. No change.

A.10.—B.10. Maple sprouts, 6 miles from smelter near Ocoee River. Healthy. No change.

A.11.—B.11. Maple sprouts, 5 miles from smelter near Ocoee River. Healthy. No change.

A.12.—B.12. White oak, 4¼ miles from smelter, near Ocoee River. Healthy. No change.

A.13.—B.13. Maple, diameter 3½ inches, 3 miles from smelter. No change.

A.14.—B.14. Post oak, 3½ miles south of smelter. Healthy. No change.

A.15.—B.15. Small black jack and sourwood, 4 miles from smelter. Healthy. No change. Leaves upon examination found to have been attacked by insects.

A.16.—B.16. Hickory and black oak, 6½ miles south of smelter. Healthy. No change.

A.17.—B.17. Red and white oaks, 7½ miles south of smelter Healthy. No change.

A.18.—B.18. Black and red oak sprouts, 8½ miles south ot smelter. Trees in back ground healthy. Red oak sprouts show no discoloration. Black oak sprouts show slight discoloration. No change.

A.19.—B.19. Poplar, 9½ miles south of smelter, flourishing and healthy. Surrounding trees, willow and alders all healthy. No change.

A.20.—B.20. Scarlet oak, 10 miles south of smelter. Healthy. Maple in right back ground healthy. No change.

A.21.—B.21. Scarlet oak, 11 miles southeast of smelter. Healthy. No change.

A.22.—B.22. Post oak and small hickory sprout, 9½ miles southeast of smelter. No change. Healthy. Small Spanish oak right of and post oak has lowest leaves destroyed by insects. Hickory sprout foreground has leaves attacked by insects.

A.23.—B.23. White oak, 8½ miles southeast of smelter, at Mineral Bluff. Healthy. No change.

A.24.—B.24. Scarlet oak, 7½ miles southeast of smelter. Healthy. No change.

A.25.—B.25. Apple tree, 6⅛ miles southeast of smelter. Healthy. Slight change due to the work of insects which, upon examination, were found to have eaten holes in the lower leaves of tree.

A.26.—B.26. White oak and post oak, 6 miles from smelter. Healthy. No change.

A.27.—B.27. Maple, 4 miles of smelter. Healthy. No change. White oaks in the right of picture are healthy. Many leaves attacked by insects.

A.28.—B.28. White oak, 1½ miles from smelter. Healthy. No change.

A.29.—B.29. Small peach tree, 8 miles southwest of smelter. Healthy. No change.

A.30.—B.30. White oak, 5½ miles southwest of smelter. Healthy. No change.

A.31.—B.31. Post oak, 3½ miles southwest of smelter. Healthy. No change.

A.32.—B.32. Spanish oak, 2½ miles southwest of smelter. Healthy except black oak, Spanish oak and black oak in right attacked by insects. Slightly discolored.

A.33.—B.33. White oak, 1½ miles southwest of smelter. No change. Healthy.

A.34.—B.34. Sourwood, 5½ miles northeast of smelter. Healthy. No change. Leaves attacked by insects. Trees in left center small locusts. Healthy. No change.

A.35.—B.35. Maple sprouts, 7 miles northeast of smelter. Healthy. No change.

A.36.—B.36. Post oak, 9 miles northeast of smelter. Healthy and no change. Upper left tall yellow pine.

A.37.—B.37. Black oaks, 10 miles northeast of smelter. Healthy. No change.

A.38.—B.38. White oak saplings, 12 miles northwest of smelter. Healthy. No change.

A.39.—B.39. Saplings white and black oaks and yellow pine scorched by fire, 11½ miles north and northeast of smelter.

A.40.—B.40. Pines, 9 miles north, northeast of smelter. Healthy. No change.

A.41.—B.41. Walnut, 7¾ miles north, northeast of smelter. Healthy. No change. This picture was taken in August from a different point of view from the photograph taken in June.

A.42.—B.42. Chestnut, 4 miles north of smelter. Healthy. No change. Slight discoloration.

A.43.—B.43. Small maple, 5 miles northeast of smelter. Healthy. No change. Leaves attacked by insects.

A.44.—B.44. Chestnut, 6 miles northeast of smelter. Healthy. No change. Good crop of chestnuts.

A.45.—B.45. Spanish oak appearing on A.45. has been cut down and does not appear in B.45., 7 miles northeast of smelter.

A.46.—B.46. Black oak, 8 miles northeast of smelter. Healthy. No change.

A.47.—B.47. White oak, 9 miles northeast of smelter. Healthy. No change. Leaves attacked by insects.

A.48.—B.48. Yellow pine, 11½ miles northeast of smelter. Healthy. No change.

A.49.—B.49. Spanish oak, 8 miles west, northwest of smelter. Healthy. To the west small white oak.

A.50.—B.50. Black oak, 7¾ miles from smelter. Healthy. No change. Leaves of tree attacked by insects.

A.51.—B.51. White oak, 6 miles west of smelter. Healthy. No change, except that fine field of sorghum appears in the photograph of August which does not appear in photograph of June.

A.52.—B.52. Chestnut, 5½ miles west, northwest from smelter. Chestnut sprouts. Healthy. No change.

A.53.—B.53. Apple tree, 4 miles west, northwest from smelter. Healthy. No change except that in August photographs there are fine apples on the trees which did not appear in the June photograph.

In explanation of the foregoing photographs it is well to state that the objects taken were selected with a view to comparisons which might be made of the conditions in the spring with the conditions which might exist in the fall after the erection of the tall stack. The routes taken were beginning at the smelter and thence away from the smelter in a circular route, thence returning to the smelter—the distances varying and are stated in this description on air line and not by country road.

Photographs filed herein as exhibit C.1. to C.28., inclusive, were taken between August 28th and September 5th, 1906, and were taken of objects of which no previous photographs had been taken. The purpose of these exhibits is to show present condition of foliage of these objects.

C.1. Hickory taken at a point 10 miles north of east from smelter, bearing good crops of nuts and healthy; good field of corn shown in back ground.

C.2. White oak, diameter 6 inches, 10½ miles north of east from smelter.

C.3. Two small yellow pines, 12 miles north of east from smelter. Healthy.

C.4. Yellow pine, diameter 6 inches, 12 miles north of east from smelter. Field of good corn in back ground. Timber on ridge in back ground in healthy and thriving condition.

C.5. Small walnut, diameter 4 inches, 12 miles north of east from smelter. Timber on ridge in back ground healthy.

C.6. Post oak with severe scar from fire, 3½ miles from smelter. Foliage of back ground healthy. Ants working in scar on post oak.

C.7. Hemlock, 11 miles south of smelter. Healthy. Foliage in back ground healthy.

C.8. Small yellow poplars 12 miles south of smelter. Healthy.

C.9. Yellow poplar, 13¼ miles south of smelter. Healthy. Foliage in back ground healthy.

C.10. Small yellow pine, diameter 5 inches, 15½ miles south of smelter. Healthy. Foliage in back ground healthy.

C.11. Post oak, 17 miles south of smelter. Healthy. Foliage in back ground healthy.

C.12. Yellow pine, 18 miles south of smelter. Healthy. Undergrowth healthy.

C.13. Pinas virginiana, 20 miles south of smelter. Healthy. Undergrowth healthy.

C.14. To the left yellow pine. Healthy. To the right post oak. Healthy. Twenty-one miles south of smelter.

C.15. Two yellow pines, rigida to the right, white oak and yellow oak all healthy. 23¼ miles south of smelter.

C.16. Spanish oak, 23½ miles south of smelter. Healthy. On the left small red oak. Leaves browned by insects. Erosion has exposed roots.

C.17. Spanish oak, 24 miles south of smelter. Healthy.

C.18. White oak, 22½ miles south, southeast of smelter. Healthy.

C.19. Apple tree, 21 miles south, southeast of smelter. Healthy. Some of lower branches dead from shading.

C.20. Black oak, 20½ miles south, southeast of smelter. Healthy.

C.21. Small post oak, diameter 5 inches, 20 miles south, southeast of smelter. Healthy.

C.22. Tall scarlet oak, diameter 12 inches, 16½ miles southeast of smelter. Healthy.

C.23. White pine, 16¼ miles southeast of smelter. Healthy.

C.24. White pine, 14¼ miles southeast of smelter. Healthy. Small bunch of needles at lower right has been scorched by fire. Trees in back ground healthy.

C.25. Spanish oak sprouts, 11½ miles southeast of smelter. Healthy.

C.26. White oak and scarlet oak, 8 miles southwest of smelter. Healthy.

C.27. Field of corn surrounding cabin, northeast of smelter, 4½ miles in North Carolina.

C.28. Walnut, 11 miles northeast of smelter in North Carolina. Healthy.

Affiant states that these photographs were taken by him and were by him developed; that in the taking and in the development effort was made to get the same condition of light, the same location of the camera and the point of view the same, so as to make the photographs taken in August a fair representation of the conditions as then existing by comparison with the conditions existing in June. It will be noted that some of the photographs appear lighter than others. This is due to the fact that some of them were taken in rainy weather. In fact, some of them were taken

while the rain was falling and the camera had to be protected by an umbrella. Some objects in some of the pictures were taken in the sunshine. For that reason where some of the photographs show the foliage looking very light in spots affiant states the lightness was due to the sunlight, as for instance, the appearance both of the road and the foliage in exhibit C.20., and as also appears in exhibit B.12.; but affiant states that the utmost care was taken in order that the views as taken and results obtained should show a fair comparison of the conditions as above stated.

ARTHUR H. CASE.

Subscribed and sworn to before me on this September 20th, 1906.

[SEAL] EDWARD HACKER,
Notary Public.

Affidavit of A. W. Lewis.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me, the undersigned authority, a Notary Public in and for Polk County, Tennessee, A. W. Lewis, who being duly sworn herein on his oath did say: That he is a practicing physician and surgeon residing at McCays, Polk County, Tennessee, and within the Ducktown Mining District;

that he has been a citizen and resident of said district for a period of five years; that he is familiar with the conditions in the Ducktown Mining District, both at this time and under the old open heap method of roasting, which was abandoned some years ago. Affiant has particularly noticed that since the erection of the high stack now used by the Tennessee Copper Company that there has been no perceptible damage from smoke either upon vegetation or animal life. Affiant has had occasion to observe the country for many miles around and has particularly noticed the improved condition from that which existed prior to the erection of the new stack. Affiant does not believe that the smoke and fumes ever were hurtful to animal life and he most positively asserts that under the present conditions there is no injurious effect by reason of the mining operations to the health of the people, or animal life.

Affiant further states that there has been no injury to vegetation within his knowledge since the erection and operation of the new high stack by the Tennessee Copper Company.

A. W. LEWIS.

Sworn to and subscribed before me this September 10th, 1906.

[SEAL]

W. A. GWINN,

Notary Public.

Affidavit of J. R. Elrod.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County }

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, J. R. Elrod, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of McCays, Polk County, Tennessee, and owns property in Fannin County, Georgia; that he is fifty-three years of age and has resided practically all of his life in the Ducktown Mining District; that he is familiar with the mining operations and conditions and has been both under the old Union Consolidated Mining Company, The Ducktown Sulphur, Copper & Iron Company, Ltd., The Pittsburg & Tennessee Copper Company and the Tennessee Copper Company. Affiant has been in position to know and does know that since the erection of the new high stack by the Tennessee Copper Company at its works, and since its operation that no injury has been done to vegetation or animal life to his knowledge.

Affiant states that he is a merchant and property owner, owning property in Fannin County, Georgia; that to affiant's own personal knowledge vegetation has not been apparently injured; that since the operation of the new stack by the Tennessee Copper Company he has been able to raise good crops of peaches within from

a quarter to half a mile of the smelter plant and stack, and that all forms of vegetation are green and thriving. Affiant further states that he is a merchant and meets many people in his business and that he has heard no complaints as to injury from any one since the operation of the new stack, but that upon the contrary the people generally seem to be entirely satisfied with the situation since the operation of said new stack.

J. R. ELROD.

Subscribed and sworn to before me on this September 10th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of M. T. Dooly.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public, M. T. Dooly, who being first duly sworn herein, on his oath did say: That affiant gave an affidavit in this cause on April 6th, 1906, immediately after the new stack had been placed in operation by the Tennessee Copper Company; that he has had frequent occasion since the operation of said stack to notice all forms of vegetation and the improved condition that

has existed, and that no perceptible injury has been done to animal or vegetable life, but upon the contrary vegetation is in a thriving condition. Affiant states that he has noticed the smoke emanating from the new high stack of the Tennessee Copper Company, that it is carried high into the air and is thoroughly disseminated, so that there has been no injury from the smoke since the same has been passing through said stack.

M. T. DOOLY.

Subscribed and sworn to before me on this September 10th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of N. C. Bandy.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, N. C. Bandy, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of McCays, Polk County, Tennessee, and is engaged in the mercantile business; that he is acquainted with the operations of the Tennessee Copper Company and the Ducktown Sulphur, Copper & Iron Company, Limited, and with the

conditions generally in and around the Ducktown Mining District; that he has lived in the immediate vicinity of the mines for the last ten years; that he was acquainted with the open heap method of roasting the copper ores, and has particularly noticed the operation of the new stack by the Tennessee Copper Company. Affiant further states upon his oath that since the operation of the new stack the general condition of vegetation has been greatly improved and that vegetation is not now affected by reason of mining operations in the immediate vicinity of the mines and works to affiant's own personal knowledge, and affiant has seen good crops of peaches, gardens and other farm products in the immediately vicinity where these mining operations are being conducted.

Affiant further states that he is fully satisfied that the improved methods now in use by the Tennessee Copper Company have produced the marked improvement upon all forms of vegetation which is now noticeable. Formerly the smoke and gases arising from these operations were emitted at a very low elevation, but now the smoke and gases are sent into the air at about an elevation of 325 feet, and is so disseminated before reaching the earth that no injury is perceptible.

N. C. BANDY.

Subscribed and sworn to before me on September 10th, 1906.

[SEAL] W. A. GWINN,

Notary Public.

Affidavit of J. N. Cason.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public, J. N. Cason, who being first duly sworn, herein, on his oath did say: That he is a resident and citizen of Fannin County, Georgia; that he is engaged in business at McCays as a jeweler and optician; that he is acquainted with the operations of the Tennessee Copper Company and the Ducktown Sulphur, Copper & Iron Company, and with the conditions generally in and around the Ducktown Mining District; that he has lived in said district about five years; that he has particularly noticed the operation of the new stack by the Tennessee Copper Company, and that since its operation the condition of vegetation has greatly improved. Affiant states that vegetation is not now affected by reason of the mining operations, and good crops and gardens are to be seen in the immediate neighborhood of affiant's home, approximately one mile south of the works of the defendant Tennessee Copper Company. Affiant has seen good crops of peaches much nearer to these works than affiant's home. Affiant further states that he is fully satisfied that the improved condition of vegetation is due to the construction and operation of said new stack, inasmuch as the fumes and gases heretofore discharged at

a low elevation are now by means of said new stack carried high into the air and thoroughly diluted with atmosphere, so that there is no injury now to either vegetation or animal life.

J. N. CASON.

Subscribed and sworn to before me on this September 10th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of Ed. Hedden.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, Ed. Hedden, who being first duly sworn herein, on his oath did say: That he is thirty years of age and engaged in the mercantile business at McCays, Polk County, Tennessee, where he has lived and resided for about one year. Formerly he resided at Blue Ridge, in Fannin County, Georgia, for six years, before removing to McCays, Tenn. Affiant is acquainted with the mining operations at Ducktown, and with conditions generally within the Ducktown Mining District; that he is acquainted with both the old and new method of treating the copper ores at Ducktown, and is familiar with conditions

that existed at the time that the ores were roasted in open heaps, and also has been acquainted with operations since the erection and operation of the new stack by the Tennessee Copper Company. Affiant further states upon his oath that since the operation of the new stack all forms of vegetation and conditions generally have been greatly improved—to such an extent that vegetation is not now affected. Affiant further states that the condition of vegetation is due to the improved methods now in use, the smoke now emanating from the new stack at a distance of about 325 feet from the ground, or a distance of approximately 500 feet above the level of the river and is so disseminated before reaching the earth as to have no damaging effect upon animal or vegetable life.

ED. HEDDEN.

Subscribed and sworn to before me on this September 10th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of Arch Ballew.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, Arch Ballew, who being first duly sworn herein, on his oath did say: That he is seventy years of age and has resided in the Ducktown Mining District practically all of his life; that he is fully acquainted with both the open heap roasting and the new method of roasting copper ores, and with conditions generally in the Ducktown Mining District. Affiant further states upon his oath that all forms of vegetation are now green, thriving and in a healthy state, and this condition has been brought about and is the direct result of the improved methods of smelting now used by the Tennessee Copper Company. Affiant further states that all crops and farm products now cultivated and raised in the mining region are as good as the class and character of soil will produce, the land being thin and sterile is not susceptible of producing extensive crops, and never was to affiant's own personal knowledge, the chief industry being the mining of copper. The lands of themselves were not capable of supporting the people without assistance from some where else.

Affiant further states that before the construction of the new

stack by the Tennessee Copper Company he heard many complaints of injury to crops and vegetation, but since said stack has been put in operation he has heard no complaints of this character, and the people seem to be well satisfied with the new method of operation. Affiant is satisfied himself that the erection and operation of this new stack has been the cause of relieving the situation.

ARCH BALLEW.

Subscribed and sworn to before me on this September 10th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. B. Witt.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, J. B. Witt, who being first duly sworn herein, on his oath did say: That he is fifty-two years of age and has resided at McCays, within one-half mile of the works of the Tennessee Copper Company for something over four years; that he is engaged in the general mercantile and banking business at McCays; that he has been acquainted with the

mining operations and conditions generally in and around the Ducktown Mining District for about forty years. Affiant states that he was acquainted with the old open heap roast method as well as the new method now in use by the Tennessee Copper Company. Affiant states that he has noticed the operation of the new stack of the Tennessee Copper Company. And he further states that all kinds of vegetation in the vicinity of McCays, which is within one-half mile of the plant of the Tennessee Copper Company is now green, thriving and in a healthy state and that the smoke and gases from said plant have not been noticeable in this section this season.

There is very little fruit and gardening done in this immediate vicinity, but from what I have noticed of that which has been raised it is in as good condition as it formerly was before there was complaint of the smoke.

J. B. WITT.

Sworn to and subscribed before me on this the 10th day of September, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of T. C. Tippett.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPLR COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, T. C. Tippett, age thirty-one years, who being first duly sworn herein, on his oath did say: That he is a liveryman, residing at McCays, Polk County, Tennessee, about half a mile from the works of the Tennessee Copper Company, and that he has resided in the Ducktown Mining District for about eleven years, and is acquainted with the present mining operations, and also the operations under the old open heap method of roasting the copper ores. Affiant further states that he has noticed the operation of the new stack of the Tennessee Copper Company, and the condition of vegetation in the vicinity since this stack was first placed in operation; that he has noticed the condition of vegetation both in Polk County, Tennessee, and Fannin County, Georgia, and no injury has been done to this vegetation since this stack was put in operation, but vegetation is in a green, thriving and healthy condition and excellent gardens are found near the plant where this smoke is generated. The improved condition of vegetation and the removal of injury to crops, fruits, etc., by the smoke has been brought about by the carrying of this smoke through this tall

stack of the Tennessee Copper Company, which is some 325 feet in height. Affiant states that before the erection of this new stack there were numerous complaints as to injury to vegetation but since the erection and operation of said stack affiant has not heard of a single complaint by any one as to any injury being done to vegetation by the smoke and fumes emanating from said high stack.

T. C. TIPPETT.

Sworn to and subscribed before me on this September 10th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of Dr. R. L. Hyder.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for said state and county, R. L. Hyder, age twenty-seven, who being first duly sworn herein, on his oath did say: That he is a practicing physician and surgeon residing at Isabella, Polk County, Tennessee, in the Ducktown Mining District, and has resided in said district about five years. Affiant states that he is familiar with the mining operations in and

around Ducktown, and knows the conditions existing before and after the new stack of the Tennessee Copper Company was put in operation. Affiant states that before said stack was placed in operation by the Tennessee Copper Company he heard of many complaints of injury to vegetation, but that since the said stack has been operated affiant has heard of no complaint of injury to vegetation. Affiant further states that he does not think that there has been any injury to vegetation since the said stack was placed in operation. He has noticed none. Affiant further states that in his professional opinion there has been no injury to the health of the citizens of the Ducktown Mining District, either in Fannin County, Georgia, or Polk County, Tennessee, by reason of the smoke and fumes arising from the operation of the copper plants.

R. L. HYDER, M. D.

Subscribed and sworn to before me on this September 10th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of G. W. Abernathy.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for said state and county, G. W. Abernathy, aged forty-six years, who being first duly sworn herein, on his oath did say: He is a merchant at Ducktown and McCays, in Polk County, Tennessee, and within the Ducktown Mining District, and has resided within said district during the last ten years; that he is familiar with the mining operations in and around Ducktown, and has been familiar with the same since about January 1st, 1894, and has watched with a great deal of interest the mining and smelting operations of all the copper companies operating in said district. Prior to the time that the open heap method was abandoned there was some damage and injury to vegetation, but affiant states that since the new stack of the Tennessee Copper Company has been put in operation there has been no damage to vegetation, but upon the contrary vegetation is green, thriving and in a healthy condition. Affiant further states that the abandonment of the open heap roasting and the erection and operation of the stack by which the smoke and fumes are carried high into the air has removed the cause of injury, and that since the operation of said high stack by the Tennessee Copper Company

affiant has heard of no complaints of injury to vegetation. Affiant further states that he has seen excellent crops of fruits and vegetables within the territory immediately contiguous to the smelter plant of the Tennessee Copper Company, being approximately within one mile of the aforesaid stack, and no perceptible injury is noticeable by affiant from smoke to any character of vegetation since the erection of said new stack.

G. W. ABERNATHY.

Subscribed and sworn to before me on this September 10th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of F. M. Jones.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for said state and county, F. M. Jones, age twenty-seven, who being first duly sworn herein, on his oath did say: That he is a merchant, conducting business at McCays, Tennessee, and a property holder of Fannin County, Georgia, and within the Ducktown Mining District; that he has resided in the Ducktown Mining District about six years, and is familiar with

the mining operations in and around Ducktown both under the old open heap roasting method and also since the erection of the tall chimney by the Tennessee Copper Company. During all of this time he has had occasion to notice vegetation under the different methods in use. Prior to the time that the open heap method was abandoned there was some damage to vegetation, but since the new stack of the Tennessee Copper Company has been put in operation to affiant's knowledge there has been no damage to vegetation, but on the contrary vegetation is green, thriving and apparently in a healthy condition—so much so that good crops of peaches and such garden vegetables as are raised are to be found in less than half a mile of the plant of the Tennessee Copper Company. The direct and proximate cause of this improved condition and the ability to raise these crops is attributable to the improved methods now used by the Tennessee Copper Company, and especially the new tall stack of the Tennessee Copper Company.

F. M. JONES.

Subscribed and sworn to before me on this September 10th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of N. C. Powell.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, N. C. Powell, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of McCays, Tennessee, and owns real estate in Fannin County, Georgia, and that he has resided in the Ducktown Mining District for about ten years. Affiant states that he is familiar with the mining operations in and around Ducktown, Tennessee, and with the methods used by the copper companies in roasting and smelting the copper ores; that he is also familiar with the conditions since the erection of the tall chimney by the Tennessee Copper Company. Affiant has watched different forms of vegetation under the different methods in use by the different companies. Prior to the time that the open heap method was abandoned there was more or less damage to vegetation, and a great deal of complaint by the adjacent land owners, but since the new stack of the Tennessee Copper Company has been put in operation to affiant's knowledge there has been no damage to vegetation, but on the contrary vegetation is green, thriving and apparently in a healthy condition and good crops of peaches and other fruits, together with garden vegetables and such crops as

are cultivated, are to be found in less than half a mile of the plant of the Tennessee Copper Company. The direct and proximate result of this improved condition and the ability of the land owners to raise these crops is attributable in my opinion to the improved methods now in use by the Tennessee Copper Company and especially the tall stack or chimney through which the smoke is carried to an elevation of some 325 feet. From affiant's experience and observation this smoke being emitted at this height is so diffused and disseminated before reaching the earth that the death dealing properties are thereby eliminated.

N. C. POWELL.

Subscribed and sworn to before me on this 10th of September, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of W. B. Garrett.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, W. B. Garrett, aged twenty-eight years, who being first duly sworn herein, on his oath did say: That he is a merchant in McCays, Polk County, Tennessee, and has been until recently a land owner in Fannin County, Georgia; that he has lived in the mining district of Ducktown and Fannin County, Georgia, for about ten or twelve years. Affiant has had occasion to particularly notice different portions of Fannin County, in the State of Georgia, and that portion of the County of Polk, in the State of Tennessee, adjacent to the mines and works of the Tennessee Copper Company; affiant has been a close observer of conditions in Polk County especially for the last seven to ten months, and states from his own personal knowledge and observation that no injury has been done to either the Fannin County, Georgia, or the Polk County, Tennessee, property by smoke emanating from the mines and works of the Tennessee Copper Company since the high stack or chimney has been in operation. Affiant states that at present all forms of vegetation is apparently healthy, green and thriving, and all the farm

and garden products which are cultivated yield as good crops as the class and character of the soil will permit.

Affiant knows of his own personal knowledge that fine peaches, tomatoes and general farm and garden products are raised in the immediate locality of McCays, both on the Tennessee side and the Georgia side, and no injury is apparent from smoke upon any of these crops. Prior to the erection of this high stack or chimney more or less damage had been done by the mining operations, and many complaints were made by the adjacent land owners, but since the erection of this high chimney through which the smoke is carried at considerable height affiant knows of no damage or injury resulting to any form of vegetation.

W. B. GARRETT.

Subscribed and sworn to before me on this September 10th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of J. M. Garrett.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, J. M. Garrett, age thirty-one years, who being first duly sworn herein, on his oath did say: That he is a merchant in McCays, Polk County, Tennessee, and that he has been a land owner in Fannin County, Georgia. Affiant states that he has been a resident and citizen of Fannin County, Georgia, and Polk County, Tennessee, all of his life, and has been familiar in a general way with all the mining operations and conditions which have existed in the Ducktown Mining District. Affiant has been all over Fannin County, Georgia, and that portion of Polk County contiguous to the mines and works of the copper companies, and has had occasion to notice crops, orchards, timber and other forms of vegetation at the various places he has had occasion to visit. Affiant has also particularly noticed conditions in Polk County, Tenn., and that portion of Fannin County adjacent to the copper operations, and especially so for the last twelve or fourteen months. Affiant states that he has frequently observed the smoke emanating from said high stack of the Tennessee Copper Company and that since the operation of said high

stack he has seen no damage or injury to any timber, crops or other vegetation by reason of the smoke and fumes which emanate from said high stack or chimney. In the town of McCays, which is within half a mile of the mines and works of the Tennessee Copper Company, vegetation is healthy, green and thriving, and all the farm and garden products which are cultivated yield as good crops as the class and character of the soil will permit. Affiant has seen tomatoes and general farm and garden products in the immediate locality of McCays, both on the Tennessee side and the Georgia side, none of which show any signs of apparent injury from this smoke. Such was not the case prior to the abandonment of the open heap method of roasting the copper ores, but the high stack or chimney put in operation by the Tennessee Copper Company last spring has, in affiant's opinion entirely relieved the cause of injury and damage to vegetation, etc.

J. M. GARRETT.

Subscribed and sworn to before me on this September 10th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of A. A. McKinney.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, A. A. McKinney, age thirty-three years, who being first duly sworn herein, on his oath did say: That he is engaged in the saw mill and lumber business and resides at Higdon's Store, Fannin County, Georgia, about eight miles a little west of south from the mines and works of the Tennessee Copper Company, and is a land owner in Fannin County, Georgia, where he has lived for ten years past. Affiant has been familiar with mining operations around Ducktown all of his life, and has had occasion to visit the various portions of Fannin County, Georgia, and a large portion of Polk County, Tennessee, and has particularly noticed the portions of these counties contiguous to the mines and works of the copper companies. He has also noticed the different crops, orchards, timber and other forms of vegetation at the various places he has had occasion to visit. Affiant has watched with a great deal of interest the construction and operation of the high stack or chimney now in use by the Tennessee Copper Company, and since its operation he has seen no damage or injury to any timber, crops or other vegetation by reason of the smoke and fumes which have emanated

from said high stack or chimney. In the town of McCays, which is within half a mile of the mines and works of the Tennessee Copper Company vegetation is in a healthy, green and thriving condition, and many excellent crops of general farm products and fruits are to be seen both in Fannin County, Georgia, and Polk County, Tennessee, and within reach of the smoke emanating from the mines and works of the copper companies. Affiant has seen tomatoes, peaches, and general farm and garden products, both in McCays on the Tennessee side, and just across the line on the Georgia side, which are in an excellent condition and no sign of smoke or injury is to be seen on any of these products. Such was not the case prior to the erection and operation of this high stack, and it is affiant's opinion from close observation that this high stack of the Tennessee Copper Company has entirely relieved the situation, and is the direct and proximate result of the ability of the adjacent land owners to raise these crops.

A. A. McKINNEY.

Subscribed and sworn to before me on this September 10th, 1906.

[SEAL]

W. A. GWINN,

Notary Public.

Affidavit of John B. Green.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me, the undersigned, a Notary Public in and for Polk County, Tennessee, John B. Green, age thirty years, who being first duly sworn herein, on his oath did say: That he is engaged in the planing mill and lumber business at McCays, Polk County, Tennessee, but lives and resides at Blue Ridge, in Fannin County, Georgia, where he has resided all of his life, and is a land owner in Fannin County, Georgia. Affiant has been familiar with mining operations and conditions in and around Ducktown Mining District, and particularly for the last six months, and has had occasion to visit various portions of Fannin County, Georgia, and that portion of Polk County in the State of Tennessee immediately contiguous to the mines and works of the copper companies. He has also noticed the different crops, orchards and timber, together with various other forms of vegetation at the various places he has had occasion to visit. About April, 1906, the defendant Tennessee Copper Company put in operation a high stack or chimney, by which the smoke is sent out at an elevation of about 325 feet, and affiant believes that there has been no injury to vegetation, etc., adjacent to said stack since its operation by the Tennessee Copper Company. Affiant states

that about two weeks ago he made an affidavit upon request of certain parties on behalf of the State of Georgia in this case, but he now states that he never has believed that the smoke which emanated from the high stack of the Tennessee Copper Company has done any injury to vegetation, and does not want to be understood in his affidavit heretofore given in this cause on behalf of the State of Georgia that the smoke and fumes issuing from said tall stack of the Tennessee Copper Company does any injury to vegetation, etc.

JNO. B. GREEN.

Subscribed and sworn to before me on this September 10th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. H. Johnson.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, J. H. Johnson, age twenty-seven years, who being first duly sworn herein, on oath did say: That he is a carpenter and resides at McCays, Polk County, Tennessee; that up to about six or eight months ago af-

fiant was a resident and citizen of Fannin County, Georgia, where he had resided all of his life. Affiant has been familiar with mining operations and conditions in and around Ducktown, both as a miner, carpenter and observer for many years past, and particularly so for the last six or eight months. He has had occasion to visit the various portions of Fannin County, in the State of Georgia, and also in Gilmer and Union Counties, Georgia, and in Polk County, Tennessee. He has also noticed the different crops, orchards, timbers and various other forms of vegetation at different places in East Tennessee and Northern Georgia. About April, 1906, the Tennessee Copper Company erected a tall stack or chimney by which the smoke and fumes are sent out at an elevation of about 325 feet, which has entirely relieved the situation, and no damage or injury has been seen by affiant on any crops, timber or other vegetation since the erection and operation of said stack. Prior to its operation such was not the case, as many adjacent land owners were complaining of the injurious effects of smoke and fumes on their crops. Affiant knows of his own personal knowledge that in the town of McCays, in Polk County, Tennessee, and just across the line from McCays, about half a mile, in Fannin County, Georgia, some excellent crops of fruits, garden vegetables, and other farm products are growing at the present time without any sign of injury from the smoke emanating from the copper operations. The direct and proximate result of this relieved situation is due to the erection and operation of this tall stack by the Tennessee Copper Company, sending out as it does the smoke at an elevation of some 325 feet, which smoke is so disseminated and diffused before reaching the ground as to be rendered entirely harmless.

J. H. JOHNSON.

Subscribed and sworn to before me on this September 10th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. J. Vellenoweth.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, J. J. Vellenoweth, age thirty-six years, who being first duly sworn herein, on his oath did say: That he resides about a mile and a half from McCays, Tennessee, in a southwest direction, and between McCays, Tennessee, and Epworth, Georgia, in Fannin County, Georgia, and that he is a land owner in Fannin County, Georgia, where he lives; that he has been familiar with the mining operations at Ducktown and the conditions that exist in the Ducktown Mining District all of his life. This present year affiant, and since the operation of the new tall stack or chimney of the Tennessee Copper Company, has had good crops of all kinds and no damage has been done by reason of smoke to vegetation so far as this affiant has seen. Before the erection and operation of the high stack of the Tennessee Copper Company this was not the case, but considerable complaint was being made by the people of injury to vegetation. This high stack has relieved the situation and people are thereby enabled to raise as good crops and garden vegetables in the immediate locality of where affiant lives as the class and character of the soil will permit. Affiant is a minister of

the gospel, and during his appointments has traveled over territory in Fannin County, Georgia, of approximately twelve miles distant from the mines and works of the Tennessee Copper Company; he has had occasion to observe all forms of vegetation in this territory, and affiant has not seen any trace of damage or injury from the smoke or fumes to any of the vegetation.

J. J. VELLENOWETH.

Subscribed and sworn to before me on this September 10th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of James Akin.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, James Akin, aged fifty-three years, who being first duly sworn herein, on his oath did say: That he is engaged in the business of teaming at McCays, Tennessee, where he has resided for the last three years, and previous to moving to McCays, affiant resided in Gilmer County, Georgia, where he was a land owner. Affiant is familiar with the conditions existing in and around Ducktown both before and

since the operation of the tall stack or chimney by the Tennessee Copper Company. Affiant has had occasion since the operation of this tall chimney to visit portions of the State of Georgia, in Fannin County, of some four miles distant and as far as the Fighting Town Camp Ground, which is now known as "Epworth." He has particularly watched conditions since the erection of this stack, has observed vegetation of all kinds and classes, none of which has been in any way injured by this smoke and the fumes from the copper operations since the new tall stack was put in operation. In a distance of from one to two miles of this tall stack of the Tennessee Copper Company this present season affiant has seen as good crops, gardens and fruits as he ever in his life saw in any section, none of which are in the least injured or damaged by the smoke and fumes from the Copper Company. This tall stack has relieved the situation and has enabled the people to raise such general crops as were formerly raised before mining operations were begun by the Copper Companies in the Ducktown Mining District.

JAMES AKIN.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of Dr. J. J. Barnes.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, J. J. Barnes, age thirty-three years, who being first duly sworn herein, on his oath did say: That he is a practicing physician and surgeon located at McCays, Polk County, Tennessee, where he has resided and been engaged in the practice of his profession for the last two and one-half years. Formerly he resided at Benton, in Polk County, Tennessee, and has in a general way been familiar with mining operations and smoke conditions both before and since the operation of the tall stack or chimney of the Tennessee Copper Company. Affiant further states that he gave an affidavit in this cause on November 11th, 1905, and here reiterates the statements therein made. Particularly since the erection and operation of the tall stack of the Tennessee Copper Company at its mines and works in Polk County, Tennessee, affiant has closely observed and particularly watched the different forms of vegetation adjacent to this copper plant. Affiant has traveled in a south, and southwesterly and westerly direction in the State of Georgia, in Fannin County, covering territory wherein so much complaint has been made by the citizens on account of this smoke. This complaint has caused

affiant to closely observe all forms of vegetation and critically inspect crops, fruits, etc., with a view of ascertaining as to whether or not these people were in any way affected or their crops injured or damaged by smoke, and affiant states upon his oath that the results of his investigations have been that no perceptible injury or damage has been done by this smoke and these fumes from the copper operations since the installation and operation of this tall chimney or stack. Affiant further states from his experience and observation that the damage and injury complained of by the citizens of Georgia is such damage and injury as accrued and occurred prior to the erection and operation of said new tall chimney or stack, and that this damage and injury is what is complained of in this suit, because affiant states that in so far as he has traveled in Georgia there has been no damage or injury of any kind since the erection and operation of said new tall stack. Over the territory above referred to affiant has seen during the present season as good crops, gardens, orchards and other forms of vegetation as is usual and ordinary in such territory without the smoke, and affiant does not believe any of these things have in any way been affected by smoke or fumes emanating from the mines and works of the Tennessee Copper Company since the operation of said stack.

J. J. BARNES, M. D.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of W. R. Ledford.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. R. Ledford, thirty years of age, who being first duly sworn herein, on his oath did say: That he is engaged as a barber at McCays, Polk County, Tennessee, where he has resided for the last two years, and prior to this time and for a number of years affiant has been familiar with mining operations and conditions in the Ducktown Mining District, living in Union County, Georgia, prior to coming to McCays, where he owns land at this time. Affiant formerly worked in the mines of the Ducktown Sulphur, Copper & Iron Company and was familiar with the old method of roasting copper ores and conditions that existed at that time and has particularly noticed vegetation, crops, fruits, etc., since the erection and operation of the tall chimney or smoke stack of the Tennessee Copper Company. Affiant has seen no damage or injury to crops or vegetation as a result of this smoke within a radius of about four miles since the operation of said stack. The distance of four miles covers the territory over which affiant has traveled since said stack was put into operation during April last. The smoke conditions in McCays have been greatly improved since

the erection of this stack, until now it is scarcely at all perceptible even under the most favorable circumstances. The sky is practically always clear, the air is pure and healthy, and the damage formerly resulting to timber, crops and vegetation has been eradicated until the adjacent land owners are enabled to raise as good crops, gardens, fruits and vegetables as the class and character of the soil under ordinary circumstances will permit. The direct and proximate cause of these improved conditions is attributable to the operation of this tall chimney by the Tennessee Copper Company, which carries the smoke to a considerable height before it is discharged into the atmosphere, where it is diffused and disseminated to such an extent as that it is rendered harmless.

W. R. LEDFORD.

Subscribed and sworn to before me on this 11th day of September, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of M. L. Brown.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, M. L. Brown, aged 30 years, who being first duly sworn herein, on his oath did say: That he is operating a barber shop at McCays, Polk County, Tennessee, where he has lived for about two years, and that prior to moving to McCays he lived at Ducktown for about six years. Affiant is familiar with mining operations and conditions at Ducktown, both before and after the erection of the tall stack of the Tennessee Copper Company; he has had occasion to closely observe timber, crops and vegetation under the different methods in use by the copper companies, and affiant states that since the operation of the tall stack of the Tennessee Copper Company which was placed in operation about April, 1906, no injury or damage has been done to timber, crops or vegetation by this smoke upon any of the lands adjacent to these mines or works. Affiant has had occasion to observe the territory for a distance of about fifteen miles, and the situation is relieved, the cause of injury removed, and all forms of vegetation seem to be taking on new life and are thriving and green, until at this time good crops, gardens and fruits, such as the busy people will take time to culti-

vate, are to be found on all sides. Affiant further states that since the operation of said stack he has not observed any damage from the smoke and fumes of any character whatever to vegetation, timber, crops, etc., and that vegetation of all kinds is now in a thriving and good condition.

Affiant states from his knowledge, observation and experience that this tall stack of the Tennessee Copper Company is the direct and proximate result of this relieved condition now to be found in the section aforementioned.

M. L. BROWN.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of R. A. Barclay.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, R. A. Barclay, aged forty-five years, who being first duly sworn herein, on his oath did say: That he is a deputy sheriff of Polk County, Tennessee, which office he has held this the second term. He has lived at

McCays for the last ten years. Affiant has been familiar with mining operations and conditions in and around the Ducktown District for practically all of his life, and has particularly observed timber, crops and vegetation both before and after the erection of the tall stack by the Tennessee Copper Company. Affiant has traveled over Northern Georgia for more than one hundred miles distant from McCays, Tennessee, and over East Tennessee to the Kentucky line, and has been in a position to know and has closely observed and watched vegetation under the different methods used in producing copper at Ducktown, and affiant says that since the erection and operation of the tall stack or chimney of the Tennessee Copper Company he has not been able to observe any perceptible injury or damage to timber, crops or vegetation within the territory above referred to, but on the contrary this affiant states that within a half mile of this stack where crops, fruits and vegetables are cared for and cultivated the present season he has seen as good fruits, vegetables and other crops as the kind of soil will produce. Affiant further says that the erection and operation of this tall stack has practically eliminated the damage and injury to adjacent lands until the same is now a thing of the past. Prior to the erection of this stack there was injury and damage and the complaint, as affiant is informed and believes, made in this suit is the result of the mining operations before said stack was erected.

R. A. BARCLAY, Deputy Sheriff.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of Arthur Witherow.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, Arthur Witherow, age twenty-five years, who being first duly sworn herein, on his oath did say: That he is a constable of the 10th Civil District of Polk County, Tennessee, residing at Copperhill, and has been living in and around Ducktown and acquainted with mining operations and conditions for the past ten years. Affiant has particularly noticed timber, crops and vegetation in the Ducktown Mining District both before and since the erection of the tall stack of the Tennessee Copper Company, and upon his oath says that no injury or damage has been done to any form of vegetation since the erection and operation of this said stack by the Tennessee Copper Company. Affiant has traveled over portions of North Georgia for a radius of about sixty miles and is in a position to know and does know the general condition of vegetation, timber, etc., within this territory, and that vegetation generally is in a green, thriving and healthy condition and not injured. Such was not the case before this stack was put in operation. Affiant has been in Georgia a great deal both before and after the stack was put in operation. He has heard no complaints since said stack

was put in operation as to damage or injury by the smoke or fumes by citizens of Georgia, but before said stack was put in operation affiant did hear many complaints from citizens of Georgia as to damage and injury to their crops, etc.

ARTHUR WITHEROW.

Subscribed and sworn to before me on this 10th day of September, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of N. E. C. Vellenoweth.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, N. E. C. Vellenoweth, thirty-two years of age, who being first duly sworn herein, on his oath did say: That affiant is a resident, citizen and land owner of Fannin County, Georgia, where he has lived and resided practically all of his life. He has had occasion to know and observe conditions in and around Ducktown Mining District under all the methods used by the mining companies.

Affiant further states that he has traveled over great deal of the State of Georgia, and particularly over the County of

Fannin, and states from his own knowledge and as far as he has seen and knows that no injury or damage has been done to field crops, orchards, timber and other forms of vegetation by defendant Tennessee Copper Company since the erection of the tall stack. He is at present engaged in farming, gardening and truck raising within about a mile and a half of the stack of said Tennessee Copper Company, where he raises all farm products common to this country and that the same is uninjured by smoke and has not been injured by smoke since the operation of said new tall stack by the Tennessee Copper Company. Formerly this was not the case, as damage and injury was done to the adjacent lands under the open heap method of roasting the copper ores, but the new method of sending the smoke high into the atmosphere as is done by the Tennessee Copper Company has entirely relieved the situation and removed the cause of injury, thus and thereby enabling those who devote time and attention to raising of crops to produce anything common to this region.

Affiant has worked in the mines, has been a close observer of conditions existing under these various methods of producing copper at Ducktown and more especially has he watched, examined and looked for smoke effects on his own field crops since the erection and operation of the tall stack aforesaid, and can safely state that no damage or injury had been done to him, or to any one else in the territory so far as he has seen and knows.

N. E. C. VELLENOWETH.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of J. J. King.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, J. J. King, age twenty-eight years, who being first duly sworn herein, on his oath did say: That he resides in Fannin County, Georgia, in about half a mile of the plant of the Tennessee Copper Company, and is engaged in selling goods and raising garden truck for his own use. Affiant has lived at McCays, Tennessee, and in Fannin County, Georgia, practically all the time for the last five years. Affiant during the present year has had particular occasion to observe vegetation and garden products at his home. At present he has an excellent garden of the general garden vegetables usually raised and that the same has not been injured since the operation of the tall stack by the defendant Tennessee Copper Company. Good gardens are raised and the same are not injured so far as affiant has seen and knows.

J. J. KING.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of B. M. Doyle.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, B. M. Doyle, fifty-three years of age, who being first duly sworn herein, on his oath did say: That he is a practicing physician and surgeon, residing at McCays, Polk County, Tennessee, where he has resided for the last three years. Affiant gave an affidavit in this cause on November 11th, 1905, which he now reiterates. This was before the erection and operation of the high stack now in use by the Tennessee Copper Company. Affiant has traveled over different portions of Gilmer, Union and Murray Counties, Georgia, and Polk County, Tennessee, and has had occasion to observe all forms of vegetation growing in this territory both before and since the erection and operation of said high stack of the Tennessee Copper Company. He has watched and closely observed vegetation, timber, etc., in this territory since said stack was placed in operation and states from his own personal knowledge and observation that said vegetation and crops is uninjured by smoke emanating from the mines and works of the Tennessee Copper Company since the operation of the stack aforementioned. He has seen good crops, gardens and fruit within from a quarter to a

half mile of the said stack this year, and many other gardens within the immediate territory which could not have been raised because of smoke injury prior to the time of the erection and operation of said stack. This tall stack, carrying the smoke to a considerable elevation before it is emitted into the surrounding atmosphere seems to so disseminate and dilute the smoke as to eliminate the injurious effect present in the smoke before the operation of said stack, and thus and thereby relieving the situation and removing the cause of injury which the smoke has heretofore had on the various kinds of vegetation. There is no doubt from affiant's experience, knowledge and observation that the ability to raise crops and gardens common to this country is the direct and proximate result of the new method of producing copper by the Tennessee Copper Company.

Affiant states that before said stack was placed in operation he heard considerable complaint from the adjacent land owners about damage and injury to their field crops, orchards, timber, and other vegetation, but since said stack has been operated this complaining has practically ceased, as the cause of injury has been removed and the situation relieved so far as the Tennessee Copper Company is concerned. New vegetation and grasses are to be seen now springing up over the territory which was formerly rendered barren by this smoke, and affiant believes that if present conditions keep up it is only a question of a short time until forests will again cover the territory, especially on the lands which have soil enough left to support forests.

B. M. DOYLE.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of W. M. Postell.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. M. Postell, aged sixty-nine years, who being first duly sworn, upon his oath did say: That he is a citizen and resident of McCays, Tenn., at this time but during all of his life he has resided in Northern Georgia, and a property holder in Georgia. Affiant states that he is well acquainted with the mining conditions in and around Ducktown generally, and has worked at the mines, and has had occasion to notice vegetation under the various mining operations pursued by the copper companies in the District. Affiant has particularly noticed vegetation since the erection and operation of the tall stack or chimney of the Tennessee Copper Company about the month of April, 1906, and affiant has not seen any injury or damage to crops or vegetation by this smoke since the stack was put in operation. Apparently the erection and operation of this stack has relieved the situation and removed the cause of injury from smoke and gases to such an extent that good crops and gardens are raised in the immediate neighborhood of McCays in Polk County, Tenn., and in Fannin County, Georgia, just across

the state line, by those who devote care and attention to the cultivation of such crops or gardens.

Affiant further states that during the present season a new growth of shrubbery, grasses and other vegetation is springing up and covering the ground which was heretofore rendered barren prior to the erection of said stack, and none of these things show any injury or damage on account of smoke.

W. M. POSTELL.

Subscribed and sworn to before me on this 11th day of September, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of Joe Howard.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, Joe Howard, age twenty-four years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of McCays, Polk County, Tennessee, and has lived in and around Ducktown for ten years; that he is familiar with mining operations, with smoke

conditions, and with the vegetation growing both before and after the erection of the high stack of the Tennessee Copper Company. Affiant further states that he has closely observed vegetation in and around McCays, within half a mile of the works of the Tennessee Copper Company since the erection and operation of the stack in question, and states from his own personal knowledge that no damage or injury has been done to vegetation, fruits and crops within the knowledge of affiant since this stack was constructed by the Tennessee Copper Company. Formerly there was complaint of smoke damage and injury by the adjacent land owners resulting from smoke fumes and gases emanating from the copper works at Ducktown, but since the erection and operation of the stack in question the situation is relieved and the cause of injury removed.

Affiant has seen excellent peaches and good garden vegetables growing this season in the immediate vicinity of the copper plants, and none of these things show any sign of injury or indication that they have been damaged by the smoke in any way.

In affiant's opinion there can be no question but that the operation of this tall stack is the direct and real cause of this improved condition which enables the citizens and land owners both in the States of Georgia and Tennessee to produce such crops and garden vegetables as they care to cultivate and as can now be seen by observation.

JOE HOWARD.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. L. Kincaid.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, J. L. Kincaid, age twenty-nine years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Polk County, Tennessee, where he has resided for many years, having been born and raised in Fannin County, Georgia, about the section where it is claimed the smoke is doing greatest injury. Affiant has been acquainted with mining conditions and the general condition of vegetation in and around Ducktown for about eleven years. He has observed the vegetation growing in and around the mines under the various methods of operations pursued by the different mining companies and more especially has he observed vegetation in that portion of Polk County, Tenn., contiguous to the mines and the portions of Fannin County, Georgia, and other portions of Georgia claimed to be most affected by the smoke and fumes from the copper operations. Affiant further says that since the erection and operation of said new stack by the Tennessee Copper Company there has been no damage or injury to timber, crops or vegetation in the above territory to affiant's own personal knowledge, but on the contrary the situation has been relieved and the

cause of injury removed, so that at present good crops and fruits are raised by those who care to devote time and attention to their cultivation. There can be no doubt from affiant's experience and observation that the smoke being carried by means of this high stack or chimney some 325 feet before discharged into the air is so disseminated and diffused before again reaching the earth that the injurious effects produced on all forms of vegetation is eliminated, as no better gardens and such stuff as is cultivated is to be found within a mile of the mines and works of the said Tennessee Copper Company.

J. L. KINCAID.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of Thomas Mashburn.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, Thomas Mashburn, aged thirty-five years, who being first duly sworn herein, on his oath did say: That he is a merchant and a resident of

McCays, Polk County, Tennessee, and has resided at McCays for the past six months, and formerly resided in North Georgia, in Gilmer County, and has also resided in Fannin County, Georgia, and has been a property holder in both of said counties. Affiant knows the conditions generally of vegetation in and around McCays since the erection and construction of the high stack now in use by the Tennessee Copper Company, and no injury to any of these things has occurred to affiant's knowledge since said stack was put in operation. He has seen good fruits and garden vegetables, raised in the immediate vicinity of the mines and works, and apparently the cause of the injury which formerly existed has been removed and the situation relieved.

THOMAS MASHBURN.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. L. Hickey.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, J. L. Hickey, age thirty-seven years, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of McCays, Tennessee, and is engaged in the barber business at McCays. Affiant states that he has lived in the mining district all his life and is familiar with mining conditions both before and since the operation of the new stack of the Tennessee Copper Company. Affiant has had occasion to notice and has noticed the vegetation in and around the mines both in Polk County, Tennessee, and Fannin County, Georgia, and he states from his knowledge and experience that no perceptible damage has been done to timber, crops or vegetation within affiant's knowledge since the erection and operation of the high stack of the Tennessee Copper Company. Before said stack was put in operation there was complaint by the adjacent land owners about damage and injury from smoke to vegetation, but that since said stack was put in operation he has heard of no complaints of this kind. Affiant believes that the operation of said new stack and the carrying of the smoke through it

to a high elevation has practically relieved the smoke situation and removed the cause of injury where affiant has been.

Affiant believes that there will be no further injury if said stack is used as it has been for the past few months. Affiant has noticed some of the very best gardens flourishing and thriving both in Polk County, Tennessee, and in Fannin County, Georgia, that can be found anywhere.

J. L. HICKEY.

Subscribed and sworn to before me this September 10th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of G. C. Wallace.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, G. C. Wallace, aged forty-five years, who being first duly sworn herein, on his oath did say: That he is a merchant residing at McCays, Polk County, Tennessee, where he has lived and resided for about three years, and that formerly he resided in Northern Georgia. Affiant is familiar with the mining operations in the Ducktown District

in a general way and more especially has he noticed vegetation in and around McCays since the erection and operation of the tall stack now in use by the Tennessee Copper Company. Affiant was also familiar with conditions and with the effect of smoke on vegetation prior to the erection of this stack, and he states from his knowledge and experience that since the operation of said stack no perceptible damage has been done to crops and vegetation in and around McCays, but on the contrary the smoke being sent out at the top of said stack at a considerable height and poured forth there into the open air seems to be so disseminated and diffused as to relieve the situation and remove the cause of injury.

During the present season and since said stack was put in operation affiant has noticed good crops of peaches and garden vegetables where the same were properly cared for and cultivated in the immediate vicinity of the mines and works of the defendant Tennessee Copper Company.

G. C. WALLACE.

Subscribed and sworn to before me on this September 10th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of A. J. Kell.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, A. J. Kell, who being first duly sworn herein, on his oath did say: That he is thirty-six years of age and resides at McCays, Polk County, Tennessee, where he has resided for the past four years. Prior to his residence in McCays he was a citizen of Gilmer County, Georgia, where he lived and resided practically all his life. Affiant during the last six or eight months has had occasion to visit various places in the State of Georgia, in Gilmer and Fannin Counties, and also in Murray County, Georgia, and he has had occasion to observe timber, crops and vegetation generally throughout the territory above referred to; he is familiar with mining conditions in and around the Ducktown Mining District and with the mining methods used by the copper companies in the district. Affiant states from his own personal knowledge and experience that since the erection and operation of the tall smoke stack and chimney erected by the Tennessee Copper Company about April, 1906, that no perceptible damage has been done to the timber or crops in the territory above referred to, to affiant's knowledge and belief. Before the erection and operation of said stack there was com-

plaints by the adjacent land owners of damage and injury to their crops, orchards and timber but since the erection of said stack the situation is relieved and the cause of injury removed until at the present time in the immediate vicinity of the mines and works of the Tennessee Copper Company good fruit and gardens, together with field crops are to be found on the properties of those who care to cultivate them. The smoke sent out as it is at the top of the tall stack, some 325 feet in height, and there discharged into the open air, seems to be so diffused and disseminated before again reaching the earth that the injurious effects heretofore noted are removed.

A. J. KELL.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL.]

W. A. GWINN,
Notary Public.

Affidavit of J. J. Barclay.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned, a Notary Public in and for said Polk County, Tennessee, J. J. Barclay, age twenty-one years, who being first duly sworn herein on his oath did say: That he is a resident and citizen of McCays, Polk County, Tennessee, where he has lived and resided for the last ten years. Affiant has worked in the mines and is familiar with mining operations and conditions in and around the Ducktown Mining District; he has also observed timber, crops and vegetation in the Ducktown District, in Fannin County, Georgia, in Gilmer County, Georgia, and various other places in Northern Georgia, visited by affiant. He has particularly noticed timber, crops and vegetation since the smoke stack of the Tennessee Copper Company was put in operation, and he states from his knowledge and experience that no damage has been done by this smoke since said stack was erected and placed in operation. Prior to the time said stack was erected there were complaints among adjacent land owners of injury from smoke, but since about April, 1906, the time said stack was put in operation, the situation is relieved and the cause of injury removed, so that during the present season affiant knows that fine fruits and gardens have been raised

in the immediate vicinity of the mines without injury from this smoke.

J. J. BARCLAY.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of H. F. Barclay.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, H. F. Barclay, age twenty-three years, who being first duly sworn herein on his oath did say: That he is a resident and citizen of McCays, Polk County, Tennessee, where he has lived and resided for the last eight years; that he is familiar with mining operations and conditions in and around Ducktown, and he has also visited various portions of the State of Georgia, including Fannin, Gilmer and Union Counties, and has observed vegetation, timber and crops in these various sections where he has visited. About April, 1906, the Tennessee Copper Company erected a tall stack or flue through

which its smoke is carried to a height of about 325 feet before being discharged into the open air. Prior to this time there was considerable complaint among citizens about damage and injury on account of this smoke but since said stack has been in operation to affiant's knowledge and belief there has been no damage on account of this smoke on this territory, but on the contrary the cause of injury seems to be removed so that during the present season good fruit and garden and field crops are to be found even in the immediate neighborhood of said stack where they receive proper care and cultivation. There can be no doubt from affiant's experience and observation that this tall stack is the direct and proximate cause of this improved condition.

H. F. BARCLAY.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. L. Collector.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, J. L. Collector, age twenty-eight years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of McCays, Polk County, Tennessee, and has a store of gents' furnishing goods, clothing, shoes, etc., just across the line in the State of Georgia; that he has resided in the Ducktown district for the past eight or nine years, and is familiar with mining operations and conditions generally in the mining district. He has also been in various portions of Georgia and East Tennessee, within the last few months and has had occasion to observe timber, crops and vegetation both in Tennessee and in the State of Georgia. Affiant states from his own personal knowledge that since the erection of the tall stack of Tennessee Copper Company which was put in operation about April, 1906, that no perceptible damage has been done by this smoke. Within the immediate vicinity of the mines and works of the Tennessee Copper Company good fruits, garden and field crops have been raised where they receive care and attention and are uninjured by smoke. There can be no doubt but that the erection and operation of this tall stack has practically relieved

the situation and removed the cause of injury, as vegetation can be seen springing up almost all over the territory where the same had been killed by former operations.

J. L. COLLECTOR.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of W. C. Bowers.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, W. C. Bowers, age forty-three years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of McCays, Polk County, Tennessee, where he has resided for the last two years, coming from Union County, Georgia, to McCays. Affiant knows the conditions in and around Ducktown both as to vegetation and the mining operations. He knows about the time the tall stack of the Tennessee Copper Company was put in operation, and has watched very closely to ascertain the effect, if any, of smoke upon

vegetation over the surrounding country, and he states from his knowledge, experience and belief that no perceptible damage has been done by this smoke since the erection and operation of said stack by the Tennessee Copper Company as he has not been able to see or detect any damage or injury on this account, and he has visited portions of Fannin County, Union County and other sections of the State of Georgia in addition to that portion of Tennessee contiguous to the mines and works of the copper companies. Prior to this erection of said stack there was complaint on account of this smoke, but there can be no doubt that the situation is relieved by means of this stack and the cause of the injury removed, as people in the immediate neighborhood have been able during the present year to produce good garden and other field crops, together with some fruit, where the same receives proper care and attention.

W. C. BOWERS.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of W. H. Vaughn.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. H. Vaughn, who being first duly sworn herein, on his oath did say: That he is 32 years of age and a citizen and resident of Copperhill, in Polk County, Tennessee. That he is an acting justice of the peace within and for Polk County, Tennessee, which office he has held for the past six years. He has resided in the Ducktown District and in the immediate vicinity twenty four years, and knows condition[illegible]nd around the mines and various other sections in North Ge[illegible]. East Tennessee and North Carolina. He has observed the timber, crops and vegetation on various lands claimed to be affected both before and since the erection and operation of the tall stack or chimney by the Tennessee Copper Company, and resides now within the smoke limit. Affiant states from his knowledge, experience and observation that the erection and operation of the tall stack of the Tennessee Copper Company has relieved the situation and removed the cause of injury theretofore existing so that people within the immediate neighborhood who care to cultivate can raise good crops and gardens wherever they choose. This has been the case since the erection and operation

of said stack. There can be no doubt but that the direct and proximate cause of the ability of the people to raise these crops is due to the operation of this stack, as a young growth of vegetation is now springing up where heretofore it would not do, that is before said stack was put into operation, and people are now able to raise gardens and field crops where the same were formerly a physical impossibility.

W. H. VAUGHN.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of E. B. Wilson.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, E. B. Wilson, age twenty-seven years, who being first duly sworn herein, on his oath did say: That he resides at McCays, in Polk County, Tennessee, where he has resided for the last three years; that he is familiar with vegetation, timber, crops and mining operations in the Ducktown district and portions of the State of Georgia, having

visited Fannin, Gilmer and Murray Counties recently. About April, 1906, to affiant's best recollection the Tennessee Copper Company erected and put in operation a tall stack or chimney by which their smoke is sent out into the air at a height of about 325 feet. Since this stack was put in operation there has been no damage or injury to timber, crops and vegetation within the territory visited by affiant to the best of his knowledge and belief. This chimney seems to remove the cause of injury so that people in the immediate vicinity of these mines are able to raise good gardens and such other field crops as they care to cultivate and some excellent fruit is to be found in less than half a mile of the copper works.

E. B. WILSON.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of W. B. Ingram.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. B. Ingram, age thirty-three years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Blue Ridge, Fannin County, Georgia, where he has resided for eleven years; that he has been familiar with the Ducktown Mining District and mining operations practically all of his life, and that he has worked in the mines at Ducktown and is familiar with the mining operations, timber, crops and vegetation both in the vicinity of the mines and also familiar with vegetation crops and timber in Fannin County, Georgia, and also in other portions of the State of Georgia; and affiant states from his knowledge, experience and observation that no perceptible damage has been done to timber, crops or vegetation either in Polk County, Tennessee, or Fannin County, Georgia, by the Tennessee Copper Company since it put in operation the tall stack which it now uses. There can be no doubt but that this tall stack has relieved the situation and removed the cause of injury, so that profitable farming and truck-

ing may be engaged in by citizens who choose to turn their attention in that direction.

W. B. INGRAM.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of W. J. Mathews.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, W. J. Mathews, age forty-five years, who being first duly sworn herein, on his oath did say: That he resides in Fannin County, Georgia, and is a land owner in said county and state, and that he is one of eight heirs who own a tract of river land containing about 400 acres, situated within a mile of the mines and works of the defendant Tennessee Copper Company, upon which land he has lived and resided all of his life. Affiant has been familiar with the mining operations generally by all the companies operating in the Ducktown district. He is familiar with the smoke conditions, with timber,

crops and vegetation, and knows about the construction and operation of the tall stack of the Tennessee Copper Company in the spring or early part of the summer of 1906. Before said stack was put in operation there was complaint by the adjacent land owners of smoke injury and damage to their timber and crops but since said stack was put in operation according to affiant's knowledge, experience and belief said Tennessee Copper Company by means of said stack has done no perceptible damage or injury to adjacent lands or timber, crops and vegetation thereon. The situation as compared to what it formerly was seems to be relieved, the cause of the injury removed until during the present season affiant has seen excellent crops and gardens and such farm products as are usually cultivated in this section on the lands upon which formerly it was impossible to raise them. Affiant speaks from his own personal observation and within a radius of six miles from the mines and work of this defendant Tennessee Copper Company. Practically speaking the Ducktown Mining District is not a farming region although different crops are successfully cultivated in the territory. There is a vast and considerable poulation in this territory which have abandoned agricultural pursuits and turned their attention to mining generally, and are now comparatively speaking, dependent upon the operations and continued activity of these defendant companies, and they hail with delight the new advent of copper production in the territory and the success attained by means of this high stack sending, as it does, its smoke high into the air, there to be discharged and disseminated and diffused before again reaching the earth, and it is this, according to affiant's knowledge, experience and belief, that has brought about the reform in copper production in the district.

W. J. MATTHEWS.

Subscribed and sworn to before me this September 11th, 1906.

[SEAL] W. A. GWINN,

Notary Public.

Affidavit of H. C. Parris.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, H. C. Parris, age twenty-nine years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Fannin County, Georgia, and a deputy sheriff of said county; that he has been a resident of Fannin County, Georgia, all his life, and that he is familiar with the condition of vegetation, timber and crops practically all over Fannin County, Georgia, and has recently been in Union, Gilmer, Pickens and other counties of the State of Georgia. He is familiar with mining operations and conditions about Ducktown, and within the mining district, and knows of the erection and operation of the tall stack now used by the Tennessee Copper Company. Affiant states that prior to the operation of said stack there were many complaints on account of injury and damage by the smoke to adjacent lands, but that since said stack has been in operation no perceptible injury or damage has been done by this smoke to any timber, crops or vegetation in the territory above referred to; and that there can be no doubt from affiant's knowledge of the country and conditions generally that the tall stack in question has relieved the situation and removed the cause of in-

jury, thus and thereby enabling the citizens in the territory to raise as good crops as they ever did unaffected and undamaged by smoke.

H. C. PARRIS.

Subscribed and sworn to before me on this 11th day of September, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of C. E. Foote.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, C. E. Foote, age twenty-one years, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Gilmer County, and has resided there all of his life. Affiant is acquainted with the mining conditions in and around Ducktown, and has been acquainted with the condition of orchards, fruits, crops and vegetation in Fannin and Gilmer Counties, Georgia, and Polk County, Tennessee, both before and after the erection of the tall chimney by the Tennessee Copper Company. Affiant states that since the

erection and operation of said tall chimney there has been no damage to crops, fruits, vegetation and timber to this affiant's own knowledge, and that vegetation, fruits, etc., are now in a thriving and good condition, good fruit and gardens and field crops now being raised where before the construction and operation of said stack it was impossible to raise the same. Affiant is satisfied that the operation of said stack of the Tennessee Copper Company has relieved the situation and thus enabled the people to raise all kinds of crops and fruits common and general to this section of country.

C. E. FOOTE.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of W. J. DeHart.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. J. DeHart, age thirty-three years, who being first duly sworn herein, on his oath did say: That he resides at McCays, Polk County, Ten-

nessee, but until recently has been a citizen of Fannin County, Georgia, residing at Mineral Bluff, some ten miles from the works of the Tennessee Copper Company; and that since the erection of the tall stack now in use by the Tennessee Copper Company affiant has seen no damage or injury to vegetation, etc., at Mineral Bluff, ten miles from the works of the Tennessee Copper Company, and has heard no complaint of any injury at said point since the erection of said new stack and its operation by the Tennessee Copper Company. Affiant states that he believes that said new stack has relieved the situation as to damage and injury from smoke.

W. J. DEHART.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. N. Standridge.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, J. N. Standridge, age sixty-five years, who being first duly sworn herein, on his oath did say: That he has been a citizen and resident of

Fannin County, Georgia, and has been acquainted with mining conditions in the Ducktown Mining District practically all of his life. Affiant states that he was acquainted with vegetation, orchards and crops generally before the erection of the stack or chimney of the Tennessee Copper Company at which time there was damage to vegetation, etc., but affiant states that since the erection and operation of said high stack there has been no damage to vegetation, crops and fruits by reason of smoke, and that good crops and gardens and fruits have been raised this season in the section aforesaid. Affiant attributes this relieved condition and the ability of the citizens to raise crops, gardens and fruits to the erection and operation of this tall stack by the Tennessee Copper Company.

J. N. STANDRIDGE.

Subscribed and sworn to before me on this 12th September, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of W. H. Howard.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. H. Howard, age fifty years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Polk County, Tennessee, and has been for many years. That affiant has been acquainted with mining operations and conditions in and around Ducktown, Tennessee, for ten years. Affiant states that he was acquainted with the damage and injury done to vegetation, etc., before the erection and operation of the high stack of the Tennessee Copper Company, and has also been acquainted with the condition of orchards, vegetation and crops since said stack was erected. Affiant states that since the erection and operation of said tall chimney of the Tennessee Copper Company there has been no perceptible injury to crops or fruits in the section adjacent to the Tennessee Copper Company's operations in Polk County, Tennessee, and Fannin County, Georgia, and that now good crops and fruits are raised without injury from smoke or fumes. Affiant states that

this relieved condition is directly attributable to the operation of the new stack in his opinion.

W. H. HOWARD.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of H. L. Faucett.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before the undersigned, a Notary Public in and for Polk County, Tennessee, H. L. Faucett, age twenty-three years, who being first duly sworn herein, on his oath did say: That he is at present a resident and citizen of Cleveland, Tennessee, but formerly and up to about thirty days ago resided in Fannin County, Georgia, and in the Ducktown Mining District. He is familiar with mining operations and conditions generally in and around Ducktown, and can state from his own personal knowledge that since the erection of the tall stack of the Tennessee Copper Company no perceptible damage has been done by

this smoke to timber, crops and vegetation within affiant's knowledge. Good crops are raised in the immediate locality, uninjured and unaffected by smoke.

H. L. FAUCETT.

Subscribed and sworn to before me on this 11th day of September, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of E. L. Greer.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, E. L. Greer, who being first duly sworn herein, on his oath did say: That he is thirty years of age and a resident of McCays, Polk County, Tennessee, and is engaged in the Insurance business. Affiant has spent practically all his life in North Georgia, living most of the time in Gilmer County, and during his residence at McCays has had occasion to make frequent visits through portions of North Georgia including the counties of Fannin and Gilmer for a distance of some thirty miles or more from the mines and works of

the copper companies in the Ducktown Mining District. Affiant is familiar with conditions generally, both as to mining operations and vegetation within the territory and he says from his experience and knowledge and from observing this vegetation within the territory over which he has traveled that no injury or damage has been done since the erection of the tall stack or chimney now in use by the Tennessee Copper Company, but on the contrary since the erection of said stack the vegetation has taken on apparently a new life and is now green, healthy and thriving and he attributes this improved condition to the erection and operation of the tall stack now in use by the Tennessee Copper Company. Before said stack was put in operation affiant heard considerable complaint from adjacent land owners about smoke conditions and injury and damage to timber, vegetation and crops on their lands but now under the present methods used by the Tennessee Copper Company that condition seems to be relieved and the cause of injury removed so far as the Tennessee Copper Company is concerned, to affiant's knowledge.

E. L. GREER.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. M. Allen.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, J. M. Allen, age twenty-four years, who being first duly sworn herein, on his oath did say: That he is an engineer residing at McCays, Polk County, Tennessee, and that he has resided in the Ducktown Mining District all of his life and knows conditions of timber, vegetation, and mining operations in the Ducktown district. Affiant says that since the erection and operation of the tall stack or chimnew now in use by the Tennessee Copper Company that no perceptible injury or damage has been done in the immediate locality of affiant's home to timber, crops, garden or vegetation by the smoke. The situation has been relieved and the cause of injury removed, people are thereby enabled to successfully engage in raising the ordinary products of the region.

J. M. ALLEN.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of Pearl Smith.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, Pearl Smith, thirty-three years of age, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of McCays, Tennessee, and for the greater part of his life has lived in and around Ducktown in the mining region. Affiant knows the conditions that exist in the mining district, and has traveled over portions of Northern Georgia, including Fannin and Gilmer Counties, and Polk County, Tennessee, and has observed the vegetation in these different sections. Affiant says that since the erection and operation of the tall stack now in use by Tennessee Copper Company that the condition of crops and vegetation in the territory above referred to is good; and that no damage or injury has been done by this smoke to affiant's knowledge, but that on the contrary good crops and gardens are raised where people care to cultivate them.

PEARL SMITH.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of Gus Smith.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me, the undersigned authority, a Notary Public in and for Polk County, Tennessee, Gus Smith, age thirty years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Fannin County, Georgia, and is familiar with conditions that exist at Ducktown, and has had occasion to notice vegetation since the erection and operation of the tall stack now in use by the Tennessee Copper Company. Affiant says that since the operation of said stack no perceptible injury or damage has been done to vegetation within affiant's knowledge but the situation is relieved and good crops and gardens are to be found and also fruits on the adjacent lands where they receive the proper care and attention.

GUS SMITH.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of A. M. Ammons.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, A. M. Ammons, who being first duly sworn herein, on his oath did say: That he is twenty-three years of age, and resident and citizen of Copperhill, Tenn., and that he has been familiar with mining operations around Ducktown for a number of years. Affiant states that since the erection of the tall stack or chimney by the Tennessee Copper Company the conditions are relieved, the cause of smoke injury has been removed so far as the Tennessee Copper Company is concerned, and so much so that such fruits, crops and garden vegetables can be raised in the immediate locality without damage or injury by smoke. Such is the case at present and has been during the present season.

A. M. AMMONS.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of W. P. Barclay.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. P. Barclay, age twenty-two years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of McCays, Tennessee, where he has resided for the last nine years; that he is familiar with mining operations in and around Ducktown and has been for a number of years. Affiant states that since the operation of the new tall stack of the Tennessee Copper Company the conditions of damage and injury to vegetation, crops, orchards, etc., has been removed so far as the Tennessee Copper Company is concerned in the territory where affiant has visited. Affiant has visited different portions of Fannin County, Georgia, and so far as affiant has observed there has been no damage or injury to crops, vegetation, timber and orchards, but on the contrary since the operation of said tall chimney the same has been uninjured by the smoke, and good crops and fruits have been raised this season in the locality above referred to. Such, however, was not the case

before the operation of said tall chimney, as before its operation there was damage by smoke.

W. P. BARCLAY.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of T. P. Owen.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, T. P. Owen, twenty-nine years of age, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Fannin County, Georgia, where he has resided for the last four years. Affiant is acquainted with mining conditions in the Ducktown Mining District. Affiant knows the condition of timber, crops and vegetation in and about the territory of three miles from the mines of the Tennessee Copper Company and has had occasion to inspect the same since erection and operation of the tall stack now in use by Tennessee Copper Company. There has been no

damage to any vegetation, crops or timber within this territory since the erection and operation of this stack but on the contrary this stack has relieved the situation and removed the cause of injury so that good crops, gardens, and orchards may be successfully raised without injury from smoke.

T. P. OWEN.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of R. L. Standridge.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, R. L. Standridge, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Fannin County, Georgia, and that he is familiar with conditions in and around Ducktown and the works of the Tennessee Copper Company, and has inspected the vegetation and crops for a distance of about four miles from the works of the Tennessee Copper Company since the operation of the high tall chimney now in use by said Tennessee Copper Company.

Affiant states that no perceptible injury or damage has been done to the timber, vegetation, crops or orchards within this territory since the erection of said stack, but that said stack has relieved the situation and removed the cause of injury, so much so that good crops, fruits, etc., may be successfully raised within this territory.

R. L. STANDRIDGE.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of D. W. Tilley.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, D. W. Tilley, age thirty years, who being first duly sworn herein, on his oath did say: That he resides at McCays, Tennessee, in the immediate vicinity of the Ducktown mines, where he has resided for many years. He is familiar with mining operations and the conditions of vegetation and timber in and around Ducktown and in Fannin

County, Georgia, and other portions of Northern Georgia since the erection and operation of the new tall stack or chimney now in use by the Tennessee Copper Company. Affiant says that since the operation of said stack he has had occasion to notice vegetation in this territory and particularly crops and fruits, and none of them have been affected by smoke since this stack was put in operation. The cause of injury which has heretofore existed has been removed by this stack until now people are able to raise the ordinary crops common to this section without injury or damage by smoke and fumes.

D. W. TILLEY.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of C. M. Ledford.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, C. M. Ledford, forty-four years of age, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Fannin

County, Georgia, and has lived and resided in and around the Ducktown Mining District for eight years. That he is familiar with mining operations and conditions both around Ducktown in the State of Tennessee, and Fannin, Union and Gilmer Counties, in the State of Georgia, which territory he has visited and inspected of recent date. He has had occasion to examine vegetation within this territory with a view of ascertaining as to whether or not same was injured or damaged by smoke since the operation of the tall stack now in use by the Tennessee Copper Company, and affiant states that no perceptible injury or damage has been done since said stack was put in operation to vegetation but on the contrary the cause of injury theretofore existing has been removed, the situation relieved, so much so that people are now able to raise good crops, gardens and fruit without damage or injury by smoke.

C. M. LEDFORD.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of B. R. Green.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, B. R. Green, who being first duly sworn herein on his oath did say: That he is a citizen and resident of Fannin County, Georgia, where he has resided for more than twenty years. He is familiar with mining conditions, and the condition of vegetation in and around Ducktown and in Fannin County, Georgia, both before and after the high stack of the Tennessee Copper Company was placed in operation. Affiant has had occasion to inspect vegetation within this territory, and states that as a result of his inspection that no damage or injury has been done to timber, crops or vegetation since said stack was put in operation by the Tennessee Copper Company in said territory, but on the contrary the situation is relieved and the cause of injury removed until during the present season people are able to raise good crops and gardens without injury or damage by smoke.

B. R. GREEN.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of J. F. Smith.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, J. F. Smith, forty-six years of age, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Fannin County, Georgia, where he has lived and resided for about ten years; that he is familiar with mining conditions in and around Ducktown in Tennessee, and in Fannin County, Georgia; and has had occasion to inspect vegetation, gardens and crops within said territory both before and after the erection of the tall stack now in use by the Tennessee Copper Company, and he states that as a result of his inspection no damage or injury has been done to vegetation, crops, etc., since said stack was put in operation, but on the contrary the injury which had existed for many years prior to the operation of said stack has by means of said stack been removed so that good crops, gardens and fruits may now be successfully raised within the territory above mentioned without injury from smoke and fumes.

J. F. SMITH.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of A. C. Parris.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, A. C. Parris, age fifty-nine years, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Fannin County, Georgia, and has lived in and around Ducktown and Fannin County for about forty-eight years. He knows conditions of vegetation and is acquainted with mining operations about Ducktown under all the different companies which have operated there, and knows in a general way the methods followed by the different copper companies in their operations. Affiant has examined and watched vegetation, both before and after the tall stack of the Tennessee Copper Company was put in operation, and states as a result of his investigations and inspections that no injury or damage has been done to any form of vegetation, crops or fruits to affiant's knowledge in Fannin County, Georgia, or adjacent to the mines and works of the copper companies in Polk County, Tennessee, since the operation of the new tall stack of the Tennessee Copper Company. This stack has relieved the situation and removed the

cause of injury until successful farming and gardening can be done by the land owners without injury from smoke.

A. C. PARRIS.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of A. L. Barnett.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, A. L. Barnett, age fifty-two years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Copperhill, in Polk County, Tennessee, where he has resided for about seven years. Formerly he resided in North Georg for about eighteen years. Affiant is familiar with conditions both as to the mining operations conducted in the district, and also familiar with timber, crops and vegetation in the territory. He has noticed vegetation both in Polk County, Tennessee, and has also traveled over portions of Fannin, Gilmer and other counties in North Georgia since the erection of the tall stack now in use

by the Tennessee Copper Company. He has had occasion to watch, observe and inspect the vegetation since the erection of said stack and affiant states as a result of his investigations that no perceptible damage or injury has been done to vegetation to affiant's knowledge since said chimney or stack has been put in operation by Tennessee Copper Company. But, on the other hand, said stack has apparently relieved the situation and removed the cause of injury so that during the present season good crops and garden vegetables and fruit can now be successfully cultivated within the territory aforesaid without damage by injury from smoke so far as the knowledge of affiant extends. Affiant is a minister of the gospel and has had occasion during his travels to observe more than casually this condition which this high stack, according to affiant's belief, has relieved.

A. L. BARNETT.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of A. M. Price.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before the undersigned authority, a Notary Public in and for Polk County, Tennessee, A. M. Price, age sixty-eight years, who being first duly sworn herein, on his oath did say: That he has resided in Polk County, Tennessee, for about thirteen years and is acquainted with the general mining conditions in and around the Ducktown Mining District. Affiant has, within the last few months, been to Blue Ridge, Georgia, and other points in Northern Georgia, and has observed the condition of timber, crops and vegetation, and from his observation and examination he is able to state that since the operation of the new tall stack by the Tennessee Copper Company there has been no damage to any of these things by smoke or fumes but the same seem to be in a thriving green and healthy state. He has noticed that good gardens, fruit and field crops have been raised this season in and around this section, more so than has been possible for many years, and he attributes this relieved condition and the ability of the farmers to raise such crops to the erection and opera-

tion of said new stack, and considers that said stack has relieved the cause of injury heretofore existing.

A. M. PRICE.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. E. Johnson.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for said county and state, J. E. Johnson, aged thirty years, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Polk County, Tennessee, and has been for a number of years. Affiant is acquainted with the mining conditions in and around the Ducktown Mining District, and is also acquainted with the condition of vegetation, crops and orchards, and has been acquainted with it both before and since the construction of the tall chimney by the Tennessee Copper Company. Affiant states that before the construction and operation of said stack there was some damage from the smoke

and fumes generated by the copper operations, but that since said stack was placed in operation last April he has not known of or heard of any injury or damage to orchards, crops and vegetation around anywhere adjacent to the plant of the Tennessee Copper Company, but that upon the contrary everything is in a growing, thriving and green state, and affiant attributes this relieved situation and the removal of the smoke injury and damage to the operation of said new stack by the Tennessee Copper Company.

J. E. JOHNSON.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of F. L. Harper.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before the undersigned authority, F. L. Harper, thirty-three years of age, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Fannin County, Georgia, where he has resided practically all of his life; that he is familiar with mining operations at Ducktown,

and conditions generally both before and after the new tall stack of the defendant Tennessee Copper Company was put in operation; and that he has had occasion to notice vegetation, crops, gardens and fruits since the erection of said new stack and he states that as a result of his investigation since said stack was erected and operated that no perceptible damage or injury has been done within the knowledge of affiant for a distance of four or five miles from said stack, being the territory over which he has traveled since the erection of said stack. The condition is relieved, the cause of injury removed and during the present season to affiant's own personal knowledge good crops, gardens and fruit can be successfully raised in the immediate vicinity of the mines and works of the defendant Tennessee Copper Company without damage or injury on account of smoke emanating from said works.

Formerly and before said stack was put in operation affiant heard complaint by the adjacent land owners of injury and damage on account of smoke and fumes from Ducktown copper works, but since said stack was put in operation the situation is relieved as above shown.

F. L. HARPER.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of W. M. Burnett.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. M. Burnett, aged thirty-two years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Polk County, Tennessee, but for years past resided in Fannin County, Georgia. He is familiar with conditions existing in the Ducktown mining district, and with the timber, crops and vegetation over the territory including portions of Fannin County, Georgia. Since the erection and operation of the tall stack of defendant Tennessee Copper Company about April, 1906, affiant has had occasion to inspect vegetation in this territory and he says as a result of his investigations that no perceptible damage or injury has been done by smoke emanating from the copper works at Ducktown since the erection and operation of said high stack.

W. M. BURNETT.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of W. H. Barclay.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. H. Barclay, age twenty-seven years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of McCays, Polk County, Tennessee, where he has resided for a period of about nine years, formerly residing in Gilmer County, Georgia, for about twelve years, and that he gave an affidavit in this case before the tall stack of the Tennessee Copper Company was placed in operation, which affidavit he now reaffirms. Affiant says that he is familiar with conditions in Polk County, Tennessee, in Fannin County, Gilmer County and other counties in the State of Georgia, and has had occasion to closely observe and minutely inspect, timber, crops, and vegetation in the above territory since the erection and operation of the tall stack put in operation by the Tennessee Copper Company about April, 1906, and as a result of inspections and observations of affiant upon his oath he says no perceptible

damage or injury has been done to crops and timber in said territory to his knowledge since said stack was placed in operation.

W. H. BARCLAY.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. A. Sparks.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, J. A. Sparks, age fifty-nine years, who, being first duly sworn herein, on his oath did say: That at present he is a resident of Polk County, Tennessee, but for thirty years past affiant resided in North Georgia. Affiant is acquainted with general conditions existing in the copper district and has inspected and observed timber, crops and vegetation during the present season, and upon his oath affiant says as a result of his investigation no damage or injury has been done to timber crops or vegetation in the territory since the opera-

tion of the high stack now used by the Tennessee Copper Company, but on the contrary people are able to raise the usual crops common to the region without damage or injury from smoke.

J. A. SPARKS.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of B. Davenport.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, B. Davenport, age twenty-nine years, who being first duly sworn herein on his oath did say: That he is a resident and citizen of Copperhill, Polk County, Tennessee, but for the greater part of his life resided in Fannin County, Georgia. Affiant says that he is familiar with conditions in the Ducktown District and in Fannin County, Georgia, and has closely observed the vegetation in this terri-

tory since the erection of the stack or chimney now in use by the Tennessee Copper Company, and affiant says from having closely inspected and examined the vegetation during the present season that no damage or injury has been done by smoke or fumes emanating from the mines and works of the Copper Companies at Ducktown, but on the contrary good crops and gardens uninjured and unaffected by smoke are to be found on the adjacent land.

B. DAVENPORT.

Subscribed and sworn to before me on September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. A. Gregory.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, J. A. Gregory, age twenty-four years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Copperhill, Polk County, Tennessee, and has been acquainted with the conditions existing in the Ducktown district for many years past, and he says from a careful inspection of the crops, timber and vegetation

in the district and portions of Fannin County, Georgia, that no perceptible damage or injury has been done by smoke and fumes emanating from the copper works at Ducktown since the erection and operation of the tall stack now in use by the Tennessee Copper Company.

J. A. GREGORY.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of M. L. Chancey.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, M. L. Chancey, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of the Ducktown Mining District but was born and raised in Fannin County, Georgia, about sixteen miles distant from the mines and works of the Tennessee Copper Company. Affiant has had occasion to inspect and examine, timber, crops and vegetation both in the Ducktown district and in Fannin

County, Georgia, since the operation of the tall stack or chimney now in use by the Tennessee Copper Company and upon his oath says that as a result of his inspections and general observations no damage or injury has been done to timber, crops or vegetation either in the Ducktown District or in Fannin County, Georgia, since the operation of said stack but on the contrary affiant says that during the present season better crops are raised than have been raised in any time past to affiant's own personal knowledge.

M. L. CHANCEY.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of B. Thomas.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, B. Thomas, age forty-five years, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Fannin County, Georgia, residing about twenty miles from the mines and works

of the Tennessee Copper Company and is familiar with the territory generally and with mining operations carried on at Ducktown. Affiant has examined and noticed vegetation in the territory since the erection and construction of the tall stack now in use by the Tennessee Copper Company, and that since the operation of said stack affiant has also been in portions of Union County, in the State of Georgia, and affiant says upon his oath, as a result of his investigations of vegetation in the territory above referred to, that no perceptible damage or injury has been done by smoke or fumes arising from the copper operations since the operation of the tall chimney now in use by the Tennessee Copper Company but that on the contrary good crops unaffected by smoke are to be found throughout the aforesaid territory.

B. THOMAS.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. E. Wilson.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority a Notary Public in and for Polk County, Tennessee, J. E. Wilson, age forty-three years, who being first duly sworn herein, on his oath did say: That he resides about five or six or seven miles from the mines and works of the Tennessee Copper Company and in Fannin County, Georgia, that he has been familiar with the mining district and the various mining operations practically all of his life, and affiant says that so far as his knowledge extends no perceptible injury has been done to timber, crops or vegetation in the territory aforesaid since the erection and operation of the tall stack now in use by the Tennessee Copper Company.

J. E. WILSON.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of W. T. Goss.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. T. Goss, age forty-eight years, who being first duly sworn herein, on his oath did say: That he lives and resides in the Ducktown District in Polk County, Tennessee, but that for about thirty-seven years he lived and resided in North Georgia. He is familiar with mining operations and conditions which exist at present in the counties of Fannin, Union, Towns and Gilmer Counties, and has had occasion recently to investigate timber, crops and vegetation in the territory above referred to and affiant says that no perceptible damage or injury has been done by the smoke and fumes emanating from the copper works at Ducktown since the erection of the tall stack now in use by the Tennessee Copper Company, but on the contrary the situation is relieved and cause of injury removed, thereby enabling the adjacent land owners to produce all the crops common to the territory uninjured and unaffected by the smoke. The direct and proximate result of this revolution in the

copper mining industry is the erection and operation of the tall stack now in use by Tennessee Copper Company.

W. T. Goss.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. C. Parker.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, J. C. Parker, age thirty-five years, who being first duly sworn herein on his oath did say: That he is a resident and citizen of Fannin County, in the State of Georgia and has been familiar with conditions both as to vegetation and copper mining in Ducktown and Fannin County, Georgia, for about two years. Affiant says that no damage or injury has been done to timber, crops or vegetation in this territory by smoke and fumes arising from the copper works at Ducktown since the operation of the tall stack or chimney now

used by the Tennessee Copper Company, but that good crops have been produced during the present season without injury from these smokes or fumes.

J. C. PARKER.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of W. P. Key.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. P. Key, age forty-seven years, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of McCays, Polk County, Tennessee, but owns land about a mile south of the mines and works of the Tennessee Copper Company in Fannin County, Georgia; that he is familiar with conditions both as to mining operations and vegetation in the territory and affiant says that no perceptible damage or injury has been done to timber crops or vegetation by smoke and fumes since the erection and operation

of the tall stack now in use by the Tennessee Copper Company; that he knows of his own personal knewledge that good garden and field crops are raised on his own lands free and uninjured by smoke during the present season; and that there can be no doubt that the direct and proximate result of the ability of the adjacent land owners to produce these crops is due to the improved method developed by the Tennessee Copper Company in the operation of said high stack.

W. P. KEY.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of W. J. Neely.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. J. Neely, age thirty-seven years, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Fannin County, Georgia, residing at Mineral Bluff, and that he is familiar with

conditions of vegetation in that portion of Georgia above referred to, and affiant says that no perceptible damage or injury has been done by smoke since the operation of the tall stack now in use by the Tennessee Copper Company, but the situation has been relieved, the cause of injury removed until the adjacent land owners are able to produce good crops, garden vegetables and fruits on the adjacent lands where they receive proper care and cultivation.

W. J. NEELY.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of C. J. Watson.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, C. J. Watson, age forty-eight years, who being first duly sworn herein, on his oath did say: That he is a resident, citizen and land owner of Fannin County, Georgia, where he has lived and resided for many years past; that he is familiar with mining operations and the

condition of vegetation in Fannin County and Ducktown District, and affiant states from his own knowledge that no perceptible damage or injury has been done by the smoke and fumes arising from copper operations at Ducktown to timber, crops and vegetation within the territory above referred to, but that on the contrary the erection and operation of the tall stack or chimney now in use by the Tennessee Copper Company has relieved the situation and removed the cause of injury, so much so that good crops, gardens and fruits are to be found everywhere where they receive proper care and cultivation.

C. J. WATSON.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of W. F. Gilbeck.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. F. Gilbeck, age thirty-two years, who being first duly sworn herein on his oath did say: That he is a resident and citizen of Copperhill,

Polk County, Tennessee, and that he has lived in the Ducktown Mining District practically all of his life; that he knows the conditions existing in and around Ducktown and portions of Fannin County, Georgia, since the erection and operation of the tall stack now in use by the Tennessee Copper Company and affiant states from his knowledge and observation that no perceptible damage or injury has been done by smoke or fumes to timber, crops and vegetation in this territory since the operation of said stack but that on the contrary the situation is relieved and the cause of injury removed, so much so that vegetation is now green and thriving and apparently in a healthy condition and good crops, gardens and fruits are to be found on the adjacent lands where the same receives proper care and cultivation.

W. F. GILBECK.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of G. D. Baker.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, G. D. Baker, age thirty-eight years, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Fannin County, Georgia, residing on the Toccoa River about eight miles from the mines and works of the Tennessee Copper Company where he has resided practically all of his life; that he is familiar with mining operations and conditions of vegetation generally in the territory covering the Ducktown District and portions of Fannin County, Georgia, and affiant states that since the operation of the tall stack of the Tennessee Copper Company and during the present season no perceptible injury or damage has been done by smoke emanating from these copper works, but on the contrary this stack has relieved the situation and removed the cause of injury, so much so that good crops, gardens and fruits, uninjured by smoke, may be found at present on adjacent lands.

G. D. BAKER.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of W. W. Panter.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. W. Panter, age fifty years, who being first duly sworn herein, on his oath did say: That he is at present a citizen of Polk County, Tennessee, but is a real estate owner in Fannin County, Georgia, where he lived and resided for many years past. Affiant is familiar with mining operations and conditions of vegetation generally upon the lands adjacent to the copper mines of the Ducktown District. Affiant says that since the operation of the tall stack now in use by the Tennessee Copper Company he has not been able to see any damage or injury to timber, crops or vegetation from the smoke and fumes emanating from these works, but on the contrary since the erection of said stack the situation is relieved to such an extent as good crops and gardens, together with fruit, uninjured by smoke, may be found in the immediate vicinity of the copper mines.

W. W. PANTER.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of L. M. Owens.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, L. M. Owens, age thirty-five years, who being first duly sworn herein, on his oath did say: That he resides in Fannin County, Georgia, near Epworth, about three and one-half miles from the copper mines at Ducktown; and that until recently he has been a land owner in Fannin County, Georgia, and knows conditions generally. Affiant states from his inspection of the timber, crops and vegetation in the territory that no perceptible damage or injury has been done by smoke and fumes since the erection and operation of the tall stack now in use by the Tennessee Copper Company, but that on the contrary affiant says that better crops, etc., are to be seen in the immediate neighborhood this year than he has ever seen before, which he attributes as the direct result of the tall stack now in use by Tennessee Copper Company.

L. M. OWENS.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of C. A. Self.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, C. A. Self, age twenty-seven years, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Union County, Georgia, and has lived there practically all his life, that he is familiar with mining operations and conditions in and around Ducktown, and with the condition of vegetation in the counties of Union and Fannin in the State of Georgia; and affiant states that he has been unable to see any damage by smoke or fumes arising from copper operations since the operation of the tall stack now in use by the Tennessee Copper Company but that on the contrary good crops, orchards and gardens uninjured by smoke and fumes from the copper operations are to be found in the territory above referred to.

C. A. SELF.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of T. N. Henson.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, T. N. Henson, age 53 years, who being first duly sworn herein, on his oath did say: That he is a land owner in North Georgia, where he has lived and resided for many years past; that he is familiar with conditions in and around Ducktown and has recently made trips through the counties of Fannin and Union in the State of Georgia. Affiant states that since the erection and operation of the tall stack now used by the Tennessee Copper Company at its mines and works no perceptible damage or injury has been done by smoke and fumes to crops, timber and vegetation to affiant's knowledge, but on the contrary the situation is relieved and the cause of injury removed so that the adjacent land owners may now produce good crops, gardens and fruits without injury by smoke.

T. N. HENSON.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Statement of J. H. Cook.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, J. H. Cook, age thirty years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Fannin County, Georgia, where he has resided for about three years. Affiant knows conditions of vegetation in the territory of the Ducktown Copper Mines, and has observed vegetation since the erection of the tall stack now used by the Tennessee Copper Company. Affiant says that no damage or injury has been done to timber, crops or vegetation in this territory by the smoke and fumes since the erection of this stack which is the direct and proximate result of the ability of adjacent land owners to raise and produce crops, gardens, etc., without injury from smoke.

J. H. COOK.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of W. E. Burgess.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. E. Burgess, who being first duly sworn herein, on his oath did say: That he resides at present in the State of North Carolina, but knows the conditions both as to mining operations and vegetation in and around the mines at Ducktown. Affiant says that no perceptible damage or injury has been done timber, crops or vegetation or any other perceptible injury by smoke and fumes since the erection and operation of the tall stack now used by the Tennessee Copper Company.

W. E. BURGESS.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of R. J. Cook.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, R. J. Cook, age twenty-eight years, who being first duly sworn herein on his oath did say: That he is a citizen and resident of Fannin County, Georgia, where he has resided for about five years; that he knows condition of vegetation immediately adjacent to the mines and works of the Tennessee Copper Company, and has had occasion to inspect and examine same recently. Affiant states upon his oath that no perceptible damage or injury has been done timber, crops and vegetation within affiant's knowledge since the operation of the tall chimney by the Tennessee Copper Company. Affiant has seen excellent gardens and fruits where they receive proper care and cultivation in the immediate vicinity of these copper works.

R. J. COOK.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of H. G. Smith.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before the undersigned authority, a Notary Public in and for Polk County, Tennessee, H. G. Smith, age thirty-seven years, who being first duly sworn herein on his oath did say: That he is a resident and citizen and real estate owner of Fannin County, Georgia, formerly residing in Gilmer County, Georgia. Affiant is acquainted with the conditions in and around Ducktown, Tennessee, and in these counties of Georgia, and upon his oath says that no damage or injury has been done to timber crops and vegetation by smoke in the territory above referred to since the operation of the tall stack now in use by the Tennessee Copper Company, but upon the contrary affiant states upon his oath that better crops and gardens are raised in this territory the present year than he has ever seen before in the history of the country.

H. G. SMITH.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of G. Standridge.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, G. Standridge, age twenty-three years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Fannin County, Georgia, and knows the condition of vegetation in the neighborhood; that no perceptible damage or injury has been done to crops, timber or vegetation since the Tennessee Copper Company erected its tall stack and put the same in operation about April, 1906.

G. STANDRIDGE.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of I. D. Jenkins.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for said county, I. D. Jenkins, age seventy-two years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Fannin County, Georgia, and has resided in Georgia about ten years; that he has traveled practically all over Fannin County and portions of Gilmer County in the State of Georgia and knows the general conditions existing with reference to mining in the Ducktown District. Affiant states on his oath that no damage or injury has been done to timber, crops or vegetation in this territory since the erection of the tall stack now in use by the Tennessee Copper Company.

I. D. JENKINS.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of H. A. Hudson.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, H. A. Hudson, age twenty-seven years, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Polk County, Tennessee, where he has lived for five years but was born and reared in the State of Georgia. Affiant knows the conditions in and around Ducktown, and states from his knowledge that no perceptible damage or injury has been done to vegetation since the erection of the tall stack now used by the Tennessee Copper Company. On the contrary during the present season good crops, gardens and fruits are raised in the immediate vicinity of the mines and works without injury by smoke. The prime and proximate cause of the relieved condition is the operation of the tall stack by this company.

H. A. HUDSON.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. E. Smith.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, J. E. Smith, age twenty-seven years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of McCays, Polk County, Tennessee, but formerly lived in Georgia for about fourteen years; that he is familiar with conditions both as to vegetation and mining operations in the Ducktown district and has had occasion to notice vegetation since the erection of the tall stack now in use by the Tennessee Copper Company. Affiant states that he has not been able to detect or see any damage or injury to vegetation in the territory since the erection of this stack but on the contrary crops, gardens and fruits are successfully raised without injury.

J. E. SMITH.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of W. H. Foster.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me, the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. H. Foster, age 42 years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Fannin County, Georgia, where he has lived for about nine years; was formerly a citizen of Gilmer County, where he now owns real estate. Affiant is acquainted with mining conditions in the Ducktown District and vegetation generally throughout the territory. Affiant has had particular occasion to investigate vegetation in the immediate vicinity of the mines and works of the Tennessee Copper Company since it erected and put in operation the tall stack which it now uses. Affiant states that as a result of his investigations no perceptible damage or injury has been done to vegetation, crops or fruits since the erection and operation of this stack, but on the contrary the situation is relieved, the cause of injury removed and during the present season adjacent land owners are able to

raise good crops, gardens and fruits where the same receives proper care and attention.

W. H. FOSTER.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. M. Stuart.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, J. M. Stuart, forty-four years of age, who being first duly sworn herein, on his oath did say: That he is a resident of Isabella, Polk County, Tennessee, where he has resided about twenty-nine years; that he is familiar with mining conditions in and around Ducktown, and also has had occasion to observe certain portions of North Georgia, particularly Fannin County. Affiant has had occasion to particularly notice vegetation in this territory since the tall stack of the Tennessee Copper Company was erected and put in operation, and he has been unable to notice any damage or injury

to vegetation since that time. The stack in question has apparently relieved the situation and removed the cause of injury so far as Tennessee Copper Company is concerned until now good crops, gardens and fruits are raised in the immediate neighborhood of these mines and works where they receive proper care and cultivation.

J. M. STUART.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of D. M. Fain.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, D. M. Fain, who being first duly sworn herein on his oath did say: That he is twenty-four years of age and a citizen and resident of Union County, Georgia, where he has lived practically all of his life. Affiant knows conditions in and around Ducktown and various portions of the State of Georgia, particularly as to the condition of vegetation since the erection and operation of the tall

stack now in use by the Tennessee Copper Company, and affiant says that during the present season and since said stack has been in operation that no perceptible damage or injury has been done to timber, crops and vegetation in this territory by smoke or fumes arising from the copper works at Ducktown. This high stack has relieved the situation.

D. M. FAIN.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of Dave Wittenbarger.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, Dave Wittenbarger, age twenty-one years, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Polk County, Tennessee, where he has lived for a number of years, and is familiar with mining conditions and the condition of vegetation in the Ducktown mining district and over certain portions of

North Georgia in which he has had occasion to travel recently. He has particularly had occasion to examine the timber, crops and vegetation with a view of ascertaining as to whether or not the same has been damaged or injured by smoke or fumes since the installation and operation of the high stack now used by the Tennessee Copper Company and as a result of his investigation affiant says that no damage or injury has been done to any crops, timber or vegetation within affiant's knowledge since the erection of said tall stack.

DAVE WITTENBARGER.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of M. D. Waldrop.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.* } No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, M. D. Waldrop, forty-five years of age, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Fannin County,

Georgia, where he has resided for a period of about six months. Formerly affiant resided in Polk County, Tennessee, for the greater portion of his life, and during all of this time has had knowledge of the Ducktown district and the general conditions therein to be found, particularly within the last six months, and since the erection of the tall stack now in use by the Tennessee Copper Company affiant has observed vegetation and crops in the immediate vicinity of the mines and works both in Tennessee and in Georgia, and affiant says that no perceptible injury or damage has been done to any form of vegetation within the knowledge of affiant since said high stack has been operated by said Tennessee Copper Company, but on the contrary affiant has seen good crops and gardens and some fruit on the adjacent lands, which have not been injured by smoke and fumes from the copper works.

M. D. WALDROP.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of John Clayton.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, John Clayton, age twenty-seven years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Benton, Polk County, Tennessee, and has lived in Polk County all of his life; that he is familiar with conditions in and around Ducktown and some portions of Georgia, and affiant says that there is no perceptible injury to timber, crops or vegetation arising from the sulphur fumes at Ducktown since the installation and operation of the tall stack now in use by the Tennessee Copper Company, but on the contrary the adjacent land owners are able to raise good crops, fruits and gardens uninjured and unaffected by this smoke.

JOHN CLAYTON.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of Jim Lowry.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, Jim Lowry, who being first duly sworn herein on his oath did say: That he is now a resident of Polk County, Tennessee, and has lived in Fannin County, Georgia, and Polk County, Tennessee, all his life. Affiant is familiar with the mining operations and conditions in the Ducktown District, and with the vegetation throughout the territory. He has had occasion to investigate vegetation with a view of ascertaining whether or not the same has in any way been affected or injured by smoke or fumes from the copper operations in the Ducktown District, and he says as a result of his investigation that no perceptible damage or injury has been done since the operation of the high stack now in use by the Tennessee Copper Company, but on the contrary he says that better crops, fruits and gardens have been raised in the district this year than he has ever seen before to his recollection and belief.

JIM LOWRY.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of H. S. Johnson.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, H. S. Johnson, age forty-two years, who being first duly sworn herein states: That he lives in the State of North Carolina about forty miles distant from mines and works of the Tennessee Copper Company at Ducktown; that he is familiar with conditions in and around Ducktown and has particularly noticed vegetation within a radius of forty miles of the copper operations, and affiant says that no perceptible damage or injury has been done by smoke or fumes during the present season to any form of vegetation to affiant's knowledge, but on the contrary affiant says that better crops, gardens and fruits are to be found in the immediate locality of these copper works than is to be found at his home some forty miles distant.

H. S. JOHNSON.

Subscribed and sworn to before me this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of P. R. Wade.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, P. R. Wade, fifty years of age, who being first duly sworn herein on his oath did say: That he is a resident and citizen of Polk County, Tennessee, where he has resided for about ten years, and that he is familiar with the mining operations and conditions in and around Ducktown generally and particularly noticed crops and vegetation since the erection and operation of the tall stack now in use by the Tennessee Copper Company. Affiant says that since said stack was operated there has been no perceptible damage or injury to crops or vegetation in the territory above mentioned to affiant's knowledge but that on the contrary good gardens and crops are raised without injury or any detrimental effect from the smoke or fumes of the copper operations.

P. R. WADE.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of F. E. Hickey.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for said County of Polk, State of Tennessee, F. E. Hickey, who being first duly sworn herein, on his oath did say: That he is twenty-four years of age and is a resident and citizen of Polk County at present, but up until a short time ago had resided in Fannin County all his life; that he is familiar with mining operations and conditions generally in and around the Ducktown district and in Fannin County, Georgia, and has had occasion to minutely inspect and critically observe vegetation both in Polk County, Tenn., and Fannin County, Ga., since the erection and operation of the tall stack now in use by the Tennessee Copper Company, and affiant says that since said stack has been in operation no damage or injury has been done to crops or vegetation in the above territory to his knowledge by smoke and fumes from the Ducktown Copper Works.

F. E. HICKEY.

Subscribed and sworn to before me this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of G. B. Holt.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, G. B. Holt, age twenty-two years, who being first duly sworn herein, on his oath did say: That he is a resident, citizen and land owner of Gilmer County, in the State of Georgia, where he has lived and resided all his life. He is familiar with mining operations and conditions in and around Ducktown and with vegetation in the mining district and in the county in which he lives and resides, and also portions of Fannin County in the State of Georgia. Affiant has had occasion to investigate and observe timber, crops and vegetation in the above territory since the operation of the tall stack which is now used by the Tennessee Copper Company and affiant says that during said operation no perceptible damage has been done to any timber, crops or vegetation by the smoke from the Ducktown Copper Works, but on the contrary good crops can be successfully grown wherever they receive proper care and cultivation.

G. B. HOLT.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of J. A. Thomason.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned, a Notary Public in and for Polk County, Tennessee, J. A. Thomason, age twenty-nine years, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Union County, Georgia, about thirty-five miles southeast of the copper works at Ducktown, Tenn., where he has lived and resided all his life; and he says that he is familiar with conditions existing in and around Ducktown and has particularly noticed crops and vegetation both in Tennessee and North Georgia, including the counties of Union and Fannin, since the erection and operation of the tall stack of the Tennessee Copper Company about April, 1906, and affiant says that as a result of his inspection and examination that no perceptible damage or injury has been done to crops or vegetation by smoke emanating from the Tennessee Copper Company works since said high stack has been operated.

J. A. THOMASON.

Subscribed and sworn to before me on September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of C. V. Rogers.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, C. V. Rogers, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Blairsville, Union County, Georgia, a distance of about thirty-six miles from the copper works at Ducktown, Tennessee. He has been familiar with the conditions in and around Ducktown for about sixteen months, but prior to this time has lived and resided in Union County, Georgia. Affiant had occasion to visit his home in Union County, Georgia, about a month ago, August, 1906, and incidentally passed through other portions of Fannin County, in the State of Georgia. He has had occasion to observe timber, crops and vegetation within this territory and inspect the same since the operation of the new stack of the Tennessee Copper Company. And affiant says that no damage or injury has been done to timber, crops or vegetation of any class or character in the above territory since the erection and operation of the stack above referred to.

C. V. ROGERS.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of Eli Justice.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, Eli Justice, age twenty-three years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Fannin County, Georgia, and owns land in North Georgia, and has lived and resided in Georgia altogether about five years, and he is familiar with the mining operations and the condition of vegetation in and around Ducktown, Tennessee, and particularly so since the operation of the tall stack now used by the Tennessee Copper Company and likewise is acquainted with different portions of the State of North Georgia for a distance of approximately five miles and knows the condition of vegetation in this territory which he has visited since the operation of the tall stack of the Tennessee Copper Company; and affiant says that no damage or injury has been done to any class or character of vegetation, including gardens, field crops, fruits, timber, etc., since said stack has been operated by the Tennessee Copper Company.

ELI JUSTICE.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of G. M. Adams.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General*, JOHN C. HART, *Plaintiff*,
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, G. M. Adams, age forty-three years, who being first duly sworn herein, on his oath did say: That he is a citizen of Lumpkin County, Georgia, and has resided in the State of Georgia all of his life; and says that he has recently visited different portions of Fannin and Union Counties, in the State of Georgia, and he knows the condition of vegetation in this territory as well as the territory contiguous to the mines and works of the Tennessee Copper Company at Ducktown. Affiant has particularly noticed vegetation in this territory since the operation of the tall stack now used by the Tennessee Copper Company, and knows of his own personal knowledge that no perceptible damage has been done by smoke and fumes arising from the operation of the copper companies at Ducktown since said high stack was put in operation.

G. M. ADAMS.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of C. W. Killian.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, C. W. Killian, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Union County, Georgia, where he has lived for twenty-one years, and that he has recent knowledge of various other counties in North Georgia and is familiar with timber, crops and vegetation in said counties as well as general conditions in and around Ducktown and the mining district. Affiant has had occasion recently to closely inspect and minutely examine the crops, timber and vegetation since the high stack of the Tennessee Copper Company was put in operation with a view of ascertaining as to whether or not there was damage or injury on account of the Ducktown smoke, and affiant says that as a result of his inspection and examination that no perceptible injury or damage has been done by smoke since said stack was put in operation within the territory above referred to, but that good crops are raised wherever they receive proper care and cultivation.

C. W. KILLIAN.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of R. N. Donaldson.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, R. N. Donaldson, age twenty-seven years, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Polk County, Tennessee, but formerly resided in Union County for a period of about eight years. Affiant has recently been through Fannin and Union Counties and knows the condition of vegetation in these counties as well as in the immediate neighborhood of the mines and works of the copper companies at Ducktown. Affiant has had occasion to inspect and observe timber, crops and vegetation within this territory since the erection and operation of the tall stack now used by the Tennessee Copper Company and he says that no perceptible damage or injury has been done by smoke or fumes to any timber, crops or vegetation since the operation of said stack within this territory to affiant's knowledge.

R. N. DONALDSON.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. W. King.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, J. W. King, age forty-one years, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Polk County, Tennessee, but formerly resided in Fannin County, Georgia. Affiant knows the conditions that exist in the immediate vicinity of the copper works as well as portions of Fannin County, Georgia, both as to mining operations and the vegetation. Since the operation of the high stack now in use during the present season by the Tennessee Copper Company he has observed crops, gardens, fruits and other vegetation generally and can say that no perceptible damage or injury has been done by smoke or fumes from the copper operations to affiant's knowledge during the present season and since said stack has been in operation.

J. W. KING.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of H. A. Matthews.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, H. A. Matthews, age twenty-three years, who being first duly sworn herein, on his oath did say: That he is a citizen of Fannin County, Georgia, residing about ten miles southwest from the copper mines of the Ducktown District where he has resided all of his life; that he is familiar with mining operations and conditions of vegetation both in the Ducktown district and Fannin County, Georgia, especially since the tall stack now in use by the Tennessee Copper Company was put in operation, and since said time affiant has had occasion to examine and closely observe the different forms of vegetation, crops, fruits, etc., growing in the above territory and he says from his own knowledge and experience that no perceptible damage or injury has been done by the smoke emanating from the copper mines at Ducktown since said high stack was put in operation.

H. A. MATTHEWS.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of J. T. Porter.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, J. T. Porter, age fifty-four years, who being first duly sworn herein, on his oath did say: That at present he resides in Polk County, Tennessee, but up until a short while back he had resided in North Georgia all of his life, and is a land owner in Georgia. Affiant has had occasion to recently visit different portions of Fannin, Union and other counties within the State of Georgia, and has since the high stack now used by the Tennessee Copper Company was put in operation inspected and examined the vegetation to be found in the above territory, and affiant says from his own knowledge and experience that no perceptible damage or injury has been done by the smoke and fumes from Ducktown to any crop, timber or vegetation to affiant's knowledge since said high stack was put in operation.

J. T. PORTER.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of Lester Price.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, Lester Price, who being first duly sworn herein, on his oath did say: That he lives and resides in the Ducktown Mining District, where he has resided practically all of his life, and he says from his own knowledge and experience that no damage or injury has been done to timber, crops or vegetation within the Ducktown District since the operation of the tall stack now used by the Tennessee Copper Company.

LESTER PRICE.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of Z. G. Early.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, Z. G. Early, age twenty-three years, who being first duly sworn herein on his oath did say: That he is now a resident and citizen of Fannin County, Georgia, where he has lived and resided all of his life. He is familiar with conditions in the Ducktown District generally and upon his oath says that no damage or injury has been done to timber, crops or vegetation either in his home county or the Ducktown District by the smoke and fumes from the copper operations at Ducktown to his knowledge since the installation of the high stack now in use by the Tennessee Copper Company.

Z. G. EARLY.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of D. A. Jones.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, D. A. Jones, thirty years of age, who being first duly sworn herein on his oath did say: That he is a citizen and resident of Fannin County, Georgia, where he has lived all of his life, and he is familiar with the conditions of vegetation and also with the mining industry in the Ducktown district, and since the high stack of the Tennessee Copper Company was put in operation has examined and inspected timber, crops and vegetation in portions of Fannin County, Georgia, as well as closer to the mines. He has also examined his own crops and affiant can say and does say that no perceptible damage or injury has been done by smoke emanating from the Ducktown Copper Works to any crops, timber or vegetation within the above territory to his knowledge since said stack was put in operation.

D. A. JONES.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of W. C. M. Ellis.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. C. M. Ellis, who being first duly sworn on his oath did say: That he is a resident and citizen of Fannin County, Georgia, where he has lived and resided all his life; and he knows conditions in the Ducktown District and has examined vegetation in the above territory and upon his oath says that as a result of his investigation that no damage or injury has been done to timber, crops, or vegetation by smoke and fumes from the Ducktown Copper Mines since the operation of the high chimney or stack now in use by the Tennessee Copper Company.

W. C. M. ELLIS.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of Robert Porter.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, Robert Porter, age twenty-six years, who being first duly sworn herein, on his oath did say: That he has lived in Polk County, Tennessee, and North Georgia all his life, and knows the general conditions existing in the above territory, and he says that no damage or injury has been done by smoke emanating from the copper mines to timber, crops and vegetation in the above territory since the erection and operation of the tall stack now in use by the Tennessee Copper Company.

ROBERT PORTER.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of T. J. Rich.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, T. J. Rich, who being first duly sworn herein, on his oath did say: That he lives in Polk County, Tennessee, where he has resided for more than four years. He is familiar with the mining operations and conditions generally in the Ducktown District and has observed the vegetation common to the territory, and affiant says that since the high stack now in use by the Tennessee Copper Company has been operated that no perceptible damage or injury has been done to vegetation in the district but that he has seen good crops, gardens and fruit, unaffected by smoke, cultivated and raised in the immediate vicinity of the mines and works of the Tennessee Copper Company.

T. J. RICH.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of W. D. Stiles.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. D. Stiles, age thirty-nine years, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Fannin County, Georgia, and knows conditions in and around Ducktown and portions of Fannin County, Ga., where he lives. Affiant has observed vegetation, crops, gardens, etc., where he lives, particularly since the high stack has been operated by the Tennessee Copper Company, and affiant says that during the present season no perceptible damage or injury has been done to any vegetation within his knowledge.

W. D. STILES.

Subscribed and sworn to before me on this September 12th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of W. C. Bonner.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me, the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. C. Bonner, age twenty-two years, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Fannin County, Georgia, where he has lived for many years past and is a land owner in said county. Affiant is familiar with conditions in and around Ducktown and with vegetation and crops and general mining operations. Affiant is engaged at present in farming, and during the present season has had occasion to particularly notice timber, crops and vegetation with a view of ascertaining as to whether or not the erection and operation of the tall stack has removed the smoke injury heretofore existing and relieved the situation entirely, and affiant states from his knowledge, critical inspection and belief that no damage has been done during the present season by this smoke as he has good crops as could possibly be, taking into consideration the nature of the soil, the season, care and cultivation. There can be no doubt but that the erection and operation of this stack of the Tennessee Copper Company

has relieved the situation to such an extent that not only affiant but others can successfully engage in farming and trucking in the territory formerly affected by smoke.

W. C. BONNER.

Subscribed and sworn to before me on this September 11th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. L. Collins.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, J. L. Collins, age twenty-one years, who being first duly sworn herein, on his oath did say: That he has resided in Polk County and in the mining district for the past six years, and is familiar with conditions of vegetation in the Ducktown district. He has recently been over portions of Fannin and Union Counties, in the State of Georgia, where he has had occasion to examine and inspect timber, crops and vegetation at the different places visited by affiant in said counties; and affiant says as a result of his investigation

no perceptible damage or injury has been done to timber, crops or vegetation by smoke and fumes emanating from the Tennessee Copper Company's works to any timber, crops and vegetation in the territory above referred to since the operation of the high stack now in use by the Tennessee Copper Company to affiant's own personal knowledge, but on the other hand affiant says that excellent crops are to be found wherever and whenever they receive the proper care and cultivation throughout the above territory.

J. L. COLLINS.

Subscribed and sworn to before me on this September 13th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of Benj. Ellison.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, Benjamin Ellison, age seventy-six years, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Fannin

County, Georgia, and has resided in Georgia for fifty odd years. Affiant is a farmer and engaged in raising field crops, fruit, etc. Affiant says that since the erection of the tall chimney by the Tennessee Copper Company last April he has had good crops, fruits, etc., and that he has not been able to detect any injury or damage from smoke or fumes from the copper works at Ducktown. Affiant resides about eight miles from Ducktown. Affiant says that his field crops, fruits, etc., are in fine condition.

BENJ. ELLISON.

Subscribed and sworn to before me on this September 13th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of J. M. Early.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, J. M. Early, age thirty-three years, being first duly sworn herein, on his oath did say: That he is a citizen, resident and land owner of Fannin County, Georgia, where he has resided all his life. Affiant is a farmer and engaged in raising field crops, fruit, etc. Affiant states

that he has, of course, noticed vegetation closely in his section of country, some seven or eight miles from McCays, Tennessee, and he says on his oath that since the erection of the tall chimney by the Tennessee Copper Company his crops have been unaffected by smoke and fumes from the operations of the Tennessee Copper Company. Affiant says that he is now able to raise as good crops as could be raised in a country where there were no copper operations. Affiant has not noticed any injury or damage whatever to his crops from smoke since the erection and operation of said tall stack.

J. M. EARLY.

Subscribed and sworn to before me on this September 13th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of W. J. Parham.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE,
Polk County.

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, W. J. Parham, thirty-seven years of age, who being first duly sworn herein on his oath did say: That he is now a resident and citizen of Fannin

County, Georgia, where he has lived all of his life, about eight miles in a southwest direction from the copper works at Ducktown. Affiant is acquainted with conditions generally in the Ducktown district both as to mining operations and vegetation. Affiant has had occasion to notice particularly vegetation, crops, fruits, etc., in the territory in which he lives and resides since the erection and operation of the tall stack now in use by the Tennessee Copper Company and affiant says that as a result of his examination that no perceptible injury has been done to any form of vegetation whatever so far as the knowledge of affiant extends since the operation of the tall stack by the Tennessee Copper Company, but on the contrary affiant says that good crops, fruits and vegetables, as good as the country affords, taking into consideration the class and character of the soil and care and attention they receive may be found during the present season uninjured and unaffected by smoke. Affiant is a land owner where he lives. He is engaged in farming and the raising of the usual crops in this mountain region, and affiant says as a result of his own experience that he is now able to raise as good crops as can be raised in the country, and that the same are unaffected by smoke.

W. J. PARHAM.

Subscribed and sworn to before me on this September 13th, 1906.

[SEAL]

W. A. GWINN,
Notary Public.

Affidavit of Francis Millsaps.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, a Notary Public in and for Polk County, Tennessee, Francis Millsaps, age 22 years, who being first duly sworn herein, on his oath did say: That he is a citizen and resident and land owner of Fannin County, Georgia, where he has resided all of his life. Affiant says that he is a farmer and raises field crops, fruit, etc., and that he has closely noticed and examined vegetation generally in his section of country, some eight miles from McCays, Tennessee, which place is about half a mile from the plant of the Tennessee Copper Company. Affiant says that since the operation of the tall chimney by the Tennessee Copper Company he has not noticed or observed any damage to crops or fruits in any way whatever from the smoke and fumes from the copper works, but that on the contrary he is prepared to state that the same is not affected by smoke or fumes but is in a thriving, green and flourishing condition.

FRANCIS MILLSAPS.

Subscribed and sworn to before me on this September 13th, 1906.

[SEAL] W. A. GWINN,
Notary Public.

Affidavit of F. M. Early.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY AND DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*
} No. 13.

STATE OF TENNESSEE, }
Polk County. }

Personally appeared before me the undersigned authority, F. M. Early, fifty-one years of age, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Fannin County, Georgia, living approximately eight miles in a southwest direction from the mines and works of the Copper Companies at Ducktown, Tennessee, where he has resided all of his life, and is the owner of a farm whereon he has lived for many years past. Affiant is acquainted with the physical conditions in and around the Ducktown Mining District and has been familiar with mining operations in a general way during the various periods of operation by the several copper companies in the district. He is at present engaged in farming and raising of the usual crops common to the territory and since the erection and operation of the tall stack now in use by the Tennessee Copper Company affiant has had occasion to examine and has closely examined and inspected different crops, timber, vegetables and general vegetation in the territory in which he lives, and affiant is able, as a result of

his farming experience and his examination of this class of vegetation to say that no perceptible damage or injury has been done to timber, crops or vegetation so far as the knowledge, experience and observation of affiant extends since the operation of the said stack, as heretofore stated, but on the contrary affiant says that he is able to raise good crops, orchards and vegetables common to the territory where he lives, unaffected by the smoke and this is the case during the present season, and he knows this state of affairs exists generally in and around his home in Fannin County.

Affiant further states upon his oath that he lives and resides in the territory in which the plaintiff in this case has procured many affidavits to be used before the Court upon the preliminary hearing of this case, and he knows that much of the complaint upon which this suit is based rests upon the statements of men in his immediate locality, and he further states that one, Thomas A. Brown, an attorney of Blue Ridge, Fannin County, Georgia, has been diligently seeking such affidavits from citizens in his neighborhood, and at the same time said Brown has been claiming to represent the plaintiff in this case; and affiant says that about last spring or some few months ago said Brown, claiming to represent the plaintiff in this case, came to affiant at or near his home in said county and at the time said Brown had an affidavit already printed or written for affiant to sign. When said Brown presented this affidavit to affiant he insisted that affiant sign said affidavit without reading the contents of the same to affiant or in any way acquainting him with the statements he proposed to have affiant to sign and swear to. Affiant objected and refused to sign such statement as being unjust and unfair and was unwarranted by the facts then presented. Whereupon said Brown in a domineering way asserted to affiant that he, affiant, had to sign said affidavit, and upon affiant's refusal again to acquiesce in the wishes and desires of said Brown, said Brown

thereupon told affiant that if he would sign said affidavit and swear to the same that affiant would thereby get the value of his land out of the copper companies, but if he did not sign and execute said affidavit that he would in effect have his home confiscated, his property destroyed, and himself turned out of doors and he would not hereafter be able to force the copper companies to compensate him for his home. Thereupon affiant told said Brown that the general complaint in the neighborhood was unwarranted and untrue; that he would not be or become a party or make an affidavit to a thing which was absolutely false, and thereupon positively and flatly refused to sign or make said affidavit or acquiesce in the wishes and desires of said Brown in this behalf.

Affiant knows of other parties to whom a similar affidavit was presented to that presented by said Brown to affiant, and in addition to this fact he has heard several other affiants who signed the affidavit for said Brown state that they had signed said affidavit without knowledge of its contents, and without knowing what they were signing and has heard them further say that they were very sorry indeed that they signed said affidavit after they were apprised of its contents. Affiant has heard some of said affiants who signed the petition or affidavit for said Brown state since they signed said petition that they were not aware that said affidavits set out such facts as that they were damaged or injured by the smoke and fumes from the copper operations at Ducktown, but that they had since been informed that the paper they signed and verified contained such statements, and that such conditions did not exist in their neighborhood and that if they signed such statements it was not their intention to do so and they did not wish to be understood in their affidavits as making statements to the effect that the copper operations in the Ducktown district in any way injured or damaged them. Affiant knows that said Brown

claiming as he did to represent the plaintiff in this case procured many affidavits in this way by not acquainting the affiants who made same with the contents of the affidavit.

F. M. EARLY.

Subscribed and sworn to before me on this September 13th, 1906.

[SEAL.]

W. A. GWINN,
Notary Public.

FILE COPY.

IN THE

Supreme Court of the United States

OCTOBER TERM, 1905.

Office Supreme Court U. S.
FILED
OCT 5 1906
JAMES H. McKENNEY,

No. 5. ORIGINAL CAUSE
IN EQUITY

THE STATE OF GEORGIA, BY ITS ATTORNEY GENERAL, JOHN C. HART, *Plaintiff*

vs.

THE TENNESSEE COPPER COMPANY, AND THE DUCKTOWN SULPHUR, COPPER & IRON COMPANY, LIMITED, *Defendants*

Supplemental Affidavits Filed by Leave of the Court in Support of Argument of Defendant Tennessee Copper Company on Application of Plaintiff for Preliminary Restraining Order.

VOLUME II

MARTIN H. VOGEL,
Of Counsel

HOWARD CORNICK,
JOHN H. FRANTZ,
Attorneys for Tennessee Copper Company

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ADDITIONAL AFFIDAVIT OF C. A. SCHENCK, FORESTER.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1906.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF NORTH CAROLINA, *Buncombe County.*

Personally appeared before me the undersigned authority, a Notary Public in and for said County, C. A. Schenck, who being first duly sworn on his oath herein, did say:

That he is the same C. A. Schenck whose first affidavit in the cause above named was filed under date of April 23, 1906, which affidavit was based on a detailed and thorough examination of the entire Ducktown region made between the dates of August 28th and September 28th, 1905.

That he has examined for a second time, at the renewed instance of the Tennessee Copper Company, together with his assistants, Walter J. Mosenthal, John M. Clancy, R. G. Burton, Thos. J. McDonald, graduate foresters, and C. D. Howe, Ph.D.,

Professor of Botany at the Biltmore Forest School, also with the assistance of Arthur H. Case, employed as photographer, the region covered by the examination of 1905 as well as other adjacent, more extended territory in the vicinity of the said region.

That this latter or second examination was conducted during the months of May, June, July, August and September, 1906, with the purpose of investigating more thoroughly the conditions existing in the entire Ducktown region, and with the purpose of comparing the conditions existing now, since the erection of the tall stack now in use by the Tennessee Copper Company, with the conditions existing during the summer and fall 1905 prior to the use of the said tall stack.

During the examination of 1906 as well as during the examination of 1905 great care was taken to examine in detail that part of the territory alleged in the bill in this cause to be injuriously affected by the sulphur fumes rising from the copper operations at Ducktown.

The objects of the observations and investigations were, above all, the woodlands of the Ducktown region in North Georgia. In addition, however, the condition of farm lands, pastures, orchards, public roads, streams and climate of the Ducktown region were carefully noted.

Photographic Investigations.

Incident to this examination, a number of photographs were taken at various points within the State of Georgia, such points being situated at varying distances from the smelter works, along the public roads traversing the Ducktown region.

These photographs were taken in two series.

The first series was taken at or about at June 1, 1906. The second series was taken at or about at September 1, 1906.

The second series exhibits exactly the same objects in September, 1906, which the first series shows in June, 1906.

Great care has been taken, in both series of photographs, to permanently establish and locate the points of observation, definitely fixing the location of the camera, the time of exposure, the conditions of light, and any other features which might influence photographic results.

These two series of photographs are intended to establish definitely and to illustrate clearly the conditions existing in the Ducktown region in the spring and in the summer of the year 1906, for the purpose of comparison.

At the occasion of the photographic tour in September, 1906, a number of additional photographs were taken at still greater distances from the smelter works.

The photographs of both series will be filed as exhibits either to the affidavit of Walter J. Mosenthal or to the affidavit of Arthur H. Case, marked and numbered consecutively A-1, A-2, A-3, A-4 and so on.

The objects photographed were not selected with a view to showing a minimum injury to vegetation in favor of the defendants. On the contrary, these objects were selected for the sole purpose of obtaining a definite basis of comparison with respect to the conditions, changed or unchanged, of the trees in the Ducktown region.

The first series of photographs was taken, under affiant's instructions, by Messrs. Walter J. Mosenthal and Jno. M. Clancy. The second series of photographs was taken, under affiant's instructions, by Messrs. Walter J. Mosenthal and Arthur H. Case.

EXTENT OF TERRITORY EXAMINED IN 1906.

Affiant's investigations, made partly in person and partly through his assistants working under his supervision, have cov-

ered, to affiant's best knowledge, the entire territory from which reports of alleged injury of vegetation due to sulphur fumes were received, and territory beyond.

GENERAL CONDITIONS OF THE FORESTS.

A. BROAD-LEAVED FORESTS. The woodlands in the country under observation consist of hardwood trees (broad-leaved trees) mixed with a small percentage of yellow pine, white pine and hemlock.

Amongst the hardwoods the prevailing species are black oaks, black jack oaks, white oaks, scarlet oaks, Spanish oaks, chestnut oaks, post oaks, red oaks, chestnuts, hickories, poplars, black gums, soft maples, sourwoods, dogwoods, birches and beeches.

These species have within the territory under observation, at the present time, value for firewood only, trees fit for the production of lumber (notably poplar) being practically absent.

This absence is in no way ascribable to the influence of sulphur fumes. On the contrary, this absence is explained on the one hand, by the extreme sterility of the soil; on the other hand, by the removal of the good trees in decades past; finally and emphatically, by the fact that fires have damaged for many years the hardwood trees, in the region under observation, to an appalling extent.

The hardwood lands of Georgia, in the region examined, comprise the poorest type of woodlands which affiant has seen in the entire Appalachian region. The woodlands contain a small amount of firewood. There is, however, no market for such firewood except the market of Ducktown, of the immmediate vicinity of Ducktown, and of the few scattered villages dotting the region under observation where the demand for firewood is very small.

The woodlands of the Ducktown region within the State of Georgia, as producers of timber, are being despoiled and have been despoiled for the purpose of pasturage. So far as affiant knows, fence laws or stock laws do not exist in the counties under observation, so that the pasturage of cattle, sheep and hogs in the woodlands is absolutely unrestricted. The hardwood lands of the region under observation will never have any value unless the State of Georgia adopts stringent fire laws—so as to prevent the continuous burning of the woodlands—and stringent stock laws—so as to remove the incentive for firing the woodlands by checking the free range of stock all over the woodlands.

The native population is and has been careless of any methods for the protection of the woodlands, disregarding absolutely any prospective value of young trees. Affiant fully believes that the Georgia farmer in the Ducktown region will be better off than he is now at a time when the remaining despoiled trees are removed and when the soil is given to the production of grassy pasture.

The damage done to the woodlands as producers of timber, by owners and neighbors, during the last forty years, is so great that it is economically irreparable, in affiant's opinion.

It is well at this point to refer to affiant's forecast given, at the occasion of the investigations in 1905, to the effect that hardwoods discolored by sulphur fumes (or any other cause) are neither killed nor permanently damaged.

The absolute truth of this forecast was clearly proven by the conditions prevailing in the hardwood lands in 1906. *The woods found discolored in September, 1905, were found as green in June, 1906, as if they had never inhaled any sulphur fumes.*

B. YELLOW PINES. The yellow pines in the territory under observation belong to the following three species: *Pinus echinata, Pinus rigida,* and *Pinus virginiana.* The two latter species do not have any value as lumber trees. The first species mentioned appears amongst the hardwoods in slight irregular admixture, or else is found occupying the fields abandoned by the farmers. None of these species appear to have been affected by sulphur fumes in the Ducktown region of Georgia during the last 12 months, but a large number of specimens of this species have been found recently killed by *Dendroctonus frontalis,* a bark beetle which is justly considered the main insect enemy of the pines in the Eastern States. By way of illustration, it might be stated that on the 130,000 acre tract in affiant's charge at Biltmore, N. C., and in many other regions throughout the Eastern States, this insect has played and is playing havoc with the pines continuously. It must be confessed that there is no known preventive of the attack of this insect. In the Ducktown region the death of the pines caused by insects is very generally, but erroneously, attributed to the action of sulphur fumes. The damage done by forests insects in the Ducktown region is great. It is here, however, not greater than in other localities situated far from smelters. Insect plagues are neither induced nor prevented by sulphur fumes.

Affiant calls attention particularly to the enormous ravages of this insect in the Southern Appalachians during the closing decades of the last century. For a graphic description of the enormous damage done by *Dendroctonus frontalis* in well stocked forests, affiant refers to Bulletin 56, pages 271 to 453, published by the West Virginia Agricultural Experiment Station, which Bulletin is written by Dr. A. D. Hopkins, of the U. S. Bureau of Entomology, the best American authority on forest insects.

Affiant files herewith as exhibits (marked a-1, a-2) to this affidavit samples of pine bark obtained in the Ducktown region and clearly showing the deadly work of the pine destroyer, *Dendroctonus frontalis.*

C. WHITE PINES. The white pine (*Pinus strobus*) is a species of numerically rare occurrence in the region under observation, appearing particularly in the valleys and canyons of the rivers. This species was infected during the summer of 1909, in parts of the Appalachian States as well as in parts of New England, with a disease, the nature of which, at the present time, is not fully revealed. The disease manifests itself in premature dropping of the needles or in the exudation of resin along the boles of the trees, and finally in death. While this condition is attributed by some of the local population of North Georgia to injury by sulphur fumes, it has been ascertained by affiant that similar conditions exist in many parts of Tennessee and North Carolina and elsewhere in the United States, hundreds of miles away from smelters. Microscopic research has revealed, in certain cases, the presence of parasitic fungi in the cambium of white pines dying in the Ducktown region. In other cases, the white pines are being killed—like the yellow pine—by *Dendroctonus frontalis.* Elsewhere (for instance near Biltmore) the death of the white pine seems to result from increased desiccation of the soil due to increased drainage of the bottom lands, or due to the burning of the leaf litter carpeting the soil.

PASTURE.

In the region under observation the hills from which the trees have been removed yield an abundant amount of sage grass, which furnishes excellent forage for cattle. The stock owners in the Ducktown region agree universally, and it is a

fact, that neither the stock nor pasture suffer in the least from sulphur contents of the atmosphere.

Farm Lands.

The Ducktown region, owing to the sterility of the soil, and owing to the steepness of the slopes of its mountains, cannot be considered a farming region. The crops raised consist chiefly of corn, sorghum and garden truck.

Although some of the mountaineers in Northern Georgia claim that some of their crops are damaged by sulphur fumes, they fully recognize the fact that the benefits due to the presence of the mining community and consisting of a ready market for their surplus products more than offset the damage which they claim to have suffered, occasionally, from sulphur smoke.

The affiant has not found that the orchards in the region under observation have been damaged by sulphur fumes. The fruit trees cease to bear, or begin to die, in this region, as well as outside the region, when neglected by their owners.

Public Roads.

The public roads in the Ducktown region are as good or as bad as any in the Southern Appalachians. It is not true that the roads of North Georgia are injuriously affected by erosion attributable to the action of sulphur smoke destructive of vegetation. The erosion of the roads is due to the steep grades of the roads, to the lack of drainage on the roads, and largely to the fact that fires destroy the dead vegetable cover on the ground, which would, if permitted to accumulate, change the rapidity of superficial drainage into slow percolation under ground.

Streams.

The streams of the Ducktown region of Georgia, generally speaking, drain into and through the State of Tennessee. The

gauge readings in the Hiwassee River, the principal stream of the Ducktown region, made by the Federal Government, are absolute proof of the fact that the presence of the smelter works does not interfere with the regularity of the stream flow. Indeed, the discharge of the Hiwassee River is known to be more steady and more regular than that of many another stream draining the Southern Appalachian region. As a consequence, the water power obtainable from the Hiwassee is about to be developed on a large scale at a point situated 14 miles from the smelters, the engineers emphasizing the fact that the Hiwassee is a particularly reliable purveyor of power.

Climatic Conditions.

Hearsay evidence has been to the effect that the operations at Ducktown have caused a diminution of the annual precipitations within the Ducktown region. It is well to note that during the month of July, 1906, the rainfall in Gilmer County, one of the counties alleged to be thus affected, according to the U. S. records kept by the Georgia Section of the Climatological Service of the U. S. Weather Bureau, was 4.56 inches higher than normal. The inhabitants of the Ducktown region claim—and rightly so, in affiant's opinion—that the growing season of 1906 was the wettest season for many years past. This excess of rainfall during 1906 has affected farm crops in Northern Georgia adversely. And the affiant adds that the growth of pathogenic fungi is also stimulated by seasons of rainfall such as was experienced in the summer of 1906.

Resume.

In giving a resume of his observations, affiant asserts:

(*a*) That no economic damage is resulting in Northern Georgia either in field, pasture or orchard from the operations of the smelters.

(*b*) That the woodlands of Northern Georgia on the whole are worthless as such, and that the operations at Ducktown are in no wise responsible for this fact. Hardwoods discolored in 1905 have formed normal shoots and normal foliage in spring of 1906.

(*c*) That the land owners in Northern Georgia are inclined to attribute to the action of sulphur fumes any actual damage to their crops, their orchards, their pastures, and their woodlands, caused by frost, drought, excess of rainfall, insects, fungus diseases, fires and reckless management.

C. A. SCHENCK.

NORTH CAROLINA. }
Buncombe County. }

Sworn to and subscribed before me this }
the 24th day of September, 1906. }

G. A. THOMASON,
[SEAL.] Notary Public.

My commission expires Oct. 14, 1907.

AFFIDAVIT OF C. D. HOWE, FORESTER.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1906.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF NORTH CAROLINA, *Transylvania County.*

Personally appeared before me the undersigned authority, a Notary Public in and for said County, C. D. Howe, who being first duly sworn on his oath herein, did say:

That he is a graduate of the University of Vermont; that he obtained his degree of Doctor of Philosophy at the University of Chicago; that he is employed on the Biltmore estate as assistant forester and as lecturer on Botany and has been so employed for two years; that under the instructions of C. A. Schenck and upon the instance of the Tennessee Copper Company he has visited the Ducktown region between the dates of September 9 and September 16, 1906; that the object of his tour to Ducktown was a study of the nature of the diseases decimating the white pine in the Ducktown region during the year 1906, causing a visible increased mortality of the white pine.

That the investigations made in the Ducktown region were not and cannot be completed at this time for the reason that the study of pathological diseases—like the study of human diseases—requires a long number of months or even years.

That the preliminary findings on his trip in the Ducktown region were as follows:

I.

The increased mortality of the white pine is ascribable in a great number of cases to the attacks of insects known as bark beetles. These bark beetles attack only trees over six inches in diameter at breast height.

II.

In a great number of other cases observed the disease of the white pine manifests itself by an irregular exudation of resin along the bole of the white pines, which exudation cannot be explained by the action of sulphur fumes, and which exudation is observed within as well as without the Ducktown region in many parts of the Eastern States. It is very likely that the cause of this exudation consists in a pathological disease due to the action of fungi.

In other cases the disease manifests itself by a premature discoloration or dropping of the leaves. This discoloration or dropping of the leaves has nothing to do with the action of sulphur fumes.

III.

Enwrapping the roots of the white pine are found the hyphæ of certain fungi, the pathological importance of which is not fully ascertained. They are entirely different in character from the so-called mycorrhiza, and it is not unlikely that the pathological diseases of the white pine are traceable to the action of these hyphæ. This root disease is found in the white pines in the Ducktown region in the case of small seedlings not over three inches high, as well as in the case of saplings, poles and trees. The nature of this disease cannot be revealed until the sporophores (fruiting bodies) belonging to the hyphæ are found.

IV.

It is well known that the white pine is one of the most sensitive species in the Eastern States, being subject to pathological diseases and insect diseases to a particularly high degree.

V.

Affiant has recently inspected at the occasion of a vacation of several weeks, the forests of his native State, Vermont, and he has been struck during this particular year 1906 by the great increase of the mortality of the white pine which, during the year 1906, shows in the State of Vermont a decidedly increased and anomalous mortality. Affiant cannot state, at this stage of his investigations, that the disease killing the white pine in Vermont is identical with the disease killing the white pine in the Southern Appalachian States.

C. D. Howe.

Sworn to and subscribed before me this the 15th day of September, 1906.

D. L. English,
Notary Public in and for Transylvania County,
North Carolina.

My commission expires on Feb. 27, 1907.

AFFIDAVIT OF WALTER J. MOSENTHAL.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,* JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF NORTH CAROLINA, *Buncombe County.*

Personally appeared before me the undersigned authority, Walter J. Mosenthal, who being first duly sworn herein on oath, did state that affiant is a forester by profession, and at the instance of the defendant, Tennessee Copper Company, and under the direction of Dr. C. A. Schenck, affiant has examined the territory adjacent to the Ducktown copper operations at Ducktown, Tennessee.

SCOPE AND METHOD OF EXAMINATION.

This examination having covered parts of the States of Tennessee, North Carolina and Georgia, and having extended into Georgia for a distance of over twenty-five miles in all directions. The first examination made by this affiant of the Georgia territory was made in the months of August and September, 1905, before the installation by the Tennessee Copper Company of the tall stack now in use by that Company. In that examination this affiant, with two assistants, made systematic explora-

tion and examination of the country in the eight principal directions of the compass (north, south, east, west, northeast, northwest, southeast and southwest) from the smelter plant of the Tennessee Copper Company. Subsequently, in the months of May and June, 1906, and since the erection of the tall stack mentioned in this affidavit, this affiant again visited the territory adjacent to the Ducktown copper operations, examining particularly that part of the territory within the State of Georgia which is alleged in the bill of complaint in this cause to have been injured. On this trip in May and June, 1906, particular points were located and photographs taken of the trees and other vegetation at those points. In taking these photographs the points were so located as that photographs might be taken at later times for the purpose of comparison. Notes were made of the location of the point of observation, location of camera, time of exposure, condition of light and other features which might influence photographs so taken. The main object of this affiant in making the trip and in taking the observation of May and June, 1906, was to establish these points for the taking of photographs on that trip and for the taking of subsequent photographs of the same objects at the same points.

Later, and during the months of August and September, 1906, this affiant, with Mr. Arthur H. Case as his assistant, again visited the same territory above mentioned, and made similar observations and took photographs of the same points where photographs had been taken during May and June, 1906, together with photographs of other points of interest in the territory alleged to have been affected in North Georgia.

At the date of making this affidavit this last series of photographs, above mentioned, taken in August and September, 1906, are being developed and printed by Mr. Case, and are not, at this moment, accessible to this affiant. Said photographs will

be filed as exhibits either to the affidavit of this affiant or to the affidavit of Mr. Case; marked and numbered consecutively A-1, A-2, A-3, etc.

In making this examination attention was paid (1) to topography, (2) woodlands, (3) farms, (4) public roads, (5) streams, (6) climatic condition, and (7) comparison of general conditions of 1905 and 1906.

1. Topography.

The Ducktown mining district is located in the southeastern part of Tennessee, in the southern portion of the Appalachian system, at an elevation of about 1,500 feet, and the mining region known as Ducktown consists of a basin of broken, rolling hills. The drainage from this territory is through the Ocoee River, as it is known in Tennessee, or Toccoa, as it is known in Georgia, northward through the State of Tennessee.

2. Woodlands.

The woodlands are composed of hardwoods, with a small proportion of yellow and white pine.

(*a*) Hardwood. The hardwoods of this region consist of various species of oak (white, post, black, scarlet, Spanish, red, chestnut and black jack), hickory, chestnut, black gum, sourwood, dogwood, soft maple, yellow poplar, cucumber, birch, linden, buckeye, walnut and beech. By far the greatest percentage of the stand is of black oak, which is probably 45 per cent.; and scarlet oak, which is probably 27 per cent. Of Spanish oak there is about 10 per cent., and of white oak about 10 per cent. Black oak in this estimate includes both the species commonly known as black oak and the species commonly known as black jack oak. The other species existing in that region, and above mentioned, being post oak, chestnut oak, Spanish oak,

scarlet oak, red oak, hickory, chestnut, soft maple, etc., comprise a very small proportion of the timber which, according to estimate, is believed to aggregate about 8 per cent. Among the hardwoods there is practically no timber fit for saw logs in the region alleged to be affected by smoke. Practically they are only valuable for firewood. This is explained by the fact that the land has been thoroughly cut over, and further by the general sterility of the soil, and by the weakening of the trees by frequent fires, as a result of which there are practically no lumber operations within the territory alleged to be affected.

(*b*) YELLOW PINE. In the region alleged to be affected the stand of yellow pine, including the species known as pitch pine (*Pinus rigida*), short leaf pine (*Pinus echinata*) and scrub pine (*Pinus virginiana*), consists of about 1½ per cent. Yellow pines in this region are so very scarce and of such poor quality that they are practically unfit for lumber for commercial purposes. A great many yellow pines have been killed by the ravages of the bark beetle *Dendroctonus frontalis*, known to be their worst insect enemy.

(*c*) WHITE PINE forms an exceedingly small proportion, one-fourth of one per cent., of the total stand. White pines occur in patches along the water-course in the canyons and valleys. Within the territory affected white pines, on account of their numerical insignificance, have very small commercial value. White pines are also subject to the attack of *Dendroctonus frontalis*. Furthermore, it has been noticed that the white pines in this region suffer from a disease, seemingly a fungus, the exact nature of which is, at present, not known. This condition is also known to exist at points far remote from the Ducktown region, in various parts of the Eastern States. In general the poor conditions of the timber may be explained by the fact that

the territory has been thoroughly cut over, by the general sterility of the soil, by the prevention of successful young growth by frequent fires, and unrestricted pasturage.

In the immediate vicinity of the smelters, at a distance of eight or ten miles, practically all the trees of any usable size (say above six inches), were cut and burned for charcoal at the time of the operations, as affiant is informed, prior to 1879. This cutting continued after that time, and, as affiant is informed, up to about 1904, for use in the open heap methods as then used, and for use as firewood for domestic purposes, this latter being continued even to the present day at increasing distances from the smelters. The fact of the cutting and the clearing of the land within the distances mentioned is borne out by the axe marks which may be even now observed upon the stumps. The only commercial value which the woodlands under observation have is such commercial value as may be obtained through cutting the timber for firewood. In affiant's opinion the commercial value of the woodlands would be increased if the timber were cut and the land used for pasturage.

3. Farms.

The region under observation is not by its very nature an agricultural district. The country is broken and hilly, the soil on the whole being exceedingly unproductive. The crops raised consist chiefly of corn, sorghum, and garden truck. Here and there a farmer is found who claims that his crops have suffered from the effects of the smoke, but even these farmers recognize the fact that the benefits afforded by the mining community in the way of offering a market for their surplus farm products more than offset the damage which they claim to have suffered from the sulphur smoke.

Apple and peach trees have nowhere been found to be damaged by smoke. Frequently farmers attribute any unhealthy appearance of the leaves of apple trees to the action of the smoke. As a matter of fact, there is no doubt in affiant's opinion that such unhealthy condition of the leaves is due to attacks by insects and *fungi. As an instance in point: A citizen of Morgantown, Georgia, was interviewed who stated that his peach trees had developed a disease which he had at first ascribed to the action of the sulphur smoke. Subsequently he sent specimen of the leaves to the State Entomologist of the State of Georgia, who decided that the affection of the trees was caused by a fungus disease known as a blight, and was in no way ascribable to the action of the sulphur smoke.* Affiant has noticed apple trees, farms and gardens bearing bountiful crops at all distances from the smelting operations. In this connection photographs taken under the direction of the affiant will be filed as part of his affidavit or that of A. H. Case, showing views of such trees.

Pastures. In the immediate vicinity of Ducktown the hills furnish an abundant amount of sage grass which affords excellent forage for cattle. To the affiant's best knowledge there is no stock law in any of the counties of Northern Georgia, as a result many cattle and hogs run at large in the woods and through browsing on the young shoots prevent a normal reproduction of the forest.

4. Public Roads.

In making all of the examination, above mentioned, numerous trips were made over and along the public roads of North Georgia in the region alleged to be injuriously affected, and the condition of these roads was particularly noted by this

affiant. The affiant, in his profession, has become acquainted with the mountain roads of Western North Carolina and of other parts of the Appalachian system. The roads of North Georgia compare favorably with the general mountain roads, and it is not true that the roads of North Georgia are injuriously affected by erosion claimed to be due to the action of the sulphur smoke in destroying vegetation. On the contrary in this affiant's opinion, the erosion, which is no worse than in other mountain sections, is caused entirely by the destruction of the ground cover by fire, thus allowing water to run off rapidly on the surface of the ground instead of percolating slowly through the accumulation of humus.

5. Streams.

The streams observed in the region under observation, as hereinbefore mentioned, drain into and through the State of Tennessee. So far as this affiant could observe there was no condition of these streams which is not common to the general Appalachian region. During the summer of 1906 freshets and cloud bursts of more or less serious nature have occurred throughout the southern part of the Appalachian system, and the effect upon the streams in this region has been no different from that upon streams in other parts of the Southern Appalachians. So that in affiant's opinion there has been no injury to the streams of Georgia which may be ascribed to the influence of sulphur fumes.

6. Climatic Conditions.

(*a*) The rainfall during the spring and summer of 1906 has been exceptionally heavy. Affiant has heard citizens of Georgia state that the rainfall has been greater than in any year for fifteen years past. (*b*) It is not true that the atmos-

phere is impregnated with vile odors and fumes. Affiant has noticed no disagreeable effects whatever from sulphur fumes in the territory under observation.

COMPARISON OF CONDITIONS OF 1905 AND 1906.

DISCOLORATION. It is well to state at this point that the examinations made in the fall of 1905 and in the spring and fall of 1906, demonstrate beyond doubt *the fact that discoloration does not mean permanent injury nor the actual killing of the timber.* Trees which had been found to be discolored in the fall of 1905 were by the examinations made in 1906 found to have again put forth leaves. In the examination of fall of 1905 a great many discolored trees were examined, and it was found that their growth had been normal, so that the fibre-producing power of discolored trees was in no wise impaired.

WALTER J. MOSENTHAL.

STATE OF NORTH CAROLINA. }
County of Jackson. }

Sworn to and subscribed before me
this 20th day of September, 1906.

FRED F. C. WOODWARD,
Justice of Peace.

AFFIDAVIT OF JULIUS H. SUSMANN.

IN THE UNITED STATES SUPREME COURT.

October Term, 1906.

STATE OF GEORGIA, *by Its Attorney General*, JOHN C. HART, *Plaintiff*,

against

THE TENNESSEE COPPER COMPANY and THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants*.

No. 13. Original.

STATE OF NEW YORK, *County of New York*, } ss.:

Personally appeared before me the undersigned, a notary in, and for the County of New York, Julius H. Susmann, who being first duly sworn, upon his oath did say:

That he is the Treasurer of the Tennessee Copper Company in the above-entitled action, is a technically educated engineer and is fully conversant with all the affairs of the Company. That he makes this affidavit as a supplement to the affidavit made on the 24th day of April, 1906, and filed in this court by J. Parke Channing, the President of the Tennessee Copper Company.

Affiant states that for the past year or more the President of the Tennessee Copper Company and some of the most eminent experts in the United States have been making elaborate tests and experiments at the works of the Tennessee Copper Company to determine whether it is technically possible to produce commercial sulphuric acid from furnace gases.

In the spring of this year plans were drawn up and construction of the works for the condensation and utilization of the fumes for the manufacture of sulphuric acid from them was begun and has since been prosecuted as vigorously as possible. The work of construction has been somewhat delayed by the difficulty of getting sufficient labor. However, at the present

time the excavations are completed and retaining walls built and the greater part of the steel work for the superstructures shaped at the shops and are being shipped to the plant as rapidly as possible. The linings for the chambers have been ordered and are partly rolled and every effort is being made to complete the plant at as early a date as circumstances will permit. At the present time over $100,000 has been actually disbursed on account of the construction of these acid chambers and in addition over $400,000 worth of material and machinery have been contracted for.

Although all this work is being pushed to completion it is yet in the nature of a huge experiment, for until an actual demonstration from actual operations is had it is not yet certain whether the production of sulphuric acid at the works of the Tennessee Copper Company will be either technically or commercially possible.

In addition to this even if the fumes could be condensed there would still be serious problems to be met and overcome, such as the question of the disposition of this vast amount of acid that would be produced.

As stated by Mr. Channing in his affidavit filed herein, "He is still experimenting and investigating this matter and the problem turns out to be an extremely complex one, involving the question of freight rates on all of the railroads of the south; of the competition of sulphur ore from Spain, Sicily, Louisiana, and the various pyrite mines of the Southern States. It involves the careful investigation of the plants at present engaged in the manufacture of sulphuric acid, and, not least of all, the ultimate capacity of the South to absorb and utilize a product of this kind. Affiant further states that unless such sulphuric acid could be disposed of commercially that there would be no other means of disposing of the same. It could not be destroyed, it could not be dumped into streams on account of the damage that

it would cause, and it could not be shipped out to sea on account of the enormous expense involved. If smelting plants were required to go to such enormous expense in disposing of their by-products it would result in the wrecking of the companies and the total annihilation of the copper mining and smelting industry in the United States.

Affiant further states that he is personally conversant with all of the copper smelting plants in the United States, Canada and Mexico, and that all said smelting works emit a sulphurous gas similar to gas emitted from the works of the Tennessee Copper Company, and states from his own knowledge that at the present day not one of such works is producing commercial sulphuric acid even in small quantities, and that while affiant hopes and believes that in the future it will be possible to utilize a part at least of the fumes now being emitted, that it has never yet been practically demonstrated.

If the Tennessee Copper Company were temporarily enjoined from continuing its smelting operations the employees would become so scattered, the business would become so disorganized, and the financial loss would be so great that the operation of the plant could probably never be resumed. The result would be not only the destruction of a great industry, but also the impoverishing of those people and their families now employed by the Tennessee Copper Company and starvation and misery to the citizens of Northern Georgia and Southern Tennessee by taking from them the only market they have for their products and labor.

JULIUS H. SUSMANN.

Subscribed and sworn to before this 20th day of September, 1906.

HENRY I. NEWELL,
Notary Public,
Queens Co., N. Y.
Certificate filed in N. Y. County.

AFFIDAVIT OF MARTIN H. VOGEL.

IN THE UNITED STATES SUPREME COURT.

October Term, 1906.

STATE OF GEORGIA, *by Its Attorney General*, JOHN C. HART, *Plaintiff*,

against

THE TENNESSEE COPPER COMPANY and THE DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants*.

No. 13. Original.

STATE OF NEW YORK, *County of New York*, } ss.:

Personally appeared before me the undersigned, a Notary Public in and for the County of New York, Martin H. Vogel, who being first duly sworn herein on his oath, did say:

That he resides in the City of New York, State of New York, and is an attorney and counsellor-at-law, and is of counsel for the Tennessee Copper Company, one of the defendants in the above-entitled action.

That for the purpose of personally ascertaining the situation and personally learning the sentiment of the citizens of Northern Georgia in regard to this action, affiant, on the 21st and 22d days of September, 1906, rode over the territory over which the plaintiff alleges to have suffered the damage set forth in its complaint, and talked with a large number of residents and land owners over this whole district.

The territory is wild and mountainous. The roads are rough and narrow. The soil is thin and poor. The population is sparse and scattered. It is not an agricultural region, and, with the exception of a few little mountain farms scattered

through the district, no effort is made toward agricultural pursuits. The timber is of a small, scrubby growth, with only an occasional tree of merchantable size and quality, and in no part of the territory is there any woodland suitable for lumbering operations.

The mountaineers live in a crude fashion in the poorest sort of farmhouses miles from each other, and, with the exception of these few isolated spots and a few people riding along the road or gathered at a country store, there is no sign of life, either man or cattle.

In his trip through this country affiant met and interviewed a great number of the citizens along the road and learned that certain persons had been trying to stir up agitation against the copper companies.

Some of the citizens stated that they had signed affidavits for the State of Georgia, but that they had not read them or known the contents thereof, but had signed them because it was represented to them that the copper companies were about to extend their plant so that the fumes would overwhelm and damage the whole territory, and unless they signed them they would never be able to recover any damage if they should be damaged, and they further stated that they did not know that the purpose of the suit was to shut down the copper companies, and that if they had known this they would not have signed.

Some of them stated that they had not been damaged, but feared from these representations that they would be damaged and therefore signed the affidavits for the plaintiff.

Some of them stated that they had been damaged, but if they had known that the suit was for shutting down the operations of the copper companies they would never have signed, as they would rather have them continue as they are even though they suffered damage, stating that they recognized the fact that

the copper companies did more good than harm both to them individually and to the community at large.

It was a noticeable fact that these few who did claim that they were damaged by the fumes could not give any specific reason for such belief, simply giving general statements and attributing any and all damage to the fumes without regard to the possibility of such damage arising from disease, reckless management, insect or other cause.

Some of the citizens stated they knew that some citizens who had signed affidavits signed them simply because they were requested to do so by parties who were trying to stir up agitation against the copper companies. In only two instances of all the citizens interviewed did affiant find any sentiment against the copper companies or any desire to have them shut down, and these parties seemed to be either opposed in principle to any large and successful enterprise, or had signed at the request of one of the parties who has been trying to stir up the agitation against the copper companies.

Some of them stated that they knew that many of their fellow citizens who had signed affidavits for the plaintiff, would never have signed them had they not been induced thereto by representations like the above, and especially if they thought that there was any likelihood of the copper companies being shut down.

From these interviews with the various citizens affiant found that the great majority of them did not consider that the fumes of the copper companies have done any damage to the country, and further that even those few who attributed any damage to their crops or woodlands to the sulphur fumes would rather have the companies continue as they are than have them cease operations.

Affiant further states that from these personal interviews

he feels certain that if a hearing be had and the matter be fairly stated to the citizens there would be but very few who would desire to have the companies cease operations, and that the statements both in the affidavits and in the allegations of plaintiff are without foundation and fact and grossly exaggerated.

The situation under which affiant was traveling through the country and the short time in which he had to go over the territory made it impossible for him to secure affidavits from everybody he met, for many of the persons who had signed affidavits for plaintiff and who had expressed themselves in favor of having the company continue business continuing operations as they are did not want to sign another affidavit, as they were not acquainted with affiant, and as they feared they would get into trouble in doing so, and as they did not have time to wait until an affidavit could be drawn up. However, some of the citizens, even some of those who had signed for the State of Georgia, were willing to and did sign affidavits, setting forth practically what affiant recites above and those affidavits are filed herewith.

Affiant annexes a printed circular which was posted in prominent places throughout the district, which poster is further evidence of the fact that it was represented that the sole purpose of the suit was to make the copper companies condense their fumes as stated in the second line of said circular, and without letting the citizens know the object of this suit if said fumes could not be condensed and disposed of.

Affiant further states that he is fully conversant with the situation at the plant of the Tennessee Copper Company in reference to the condensation of the fumes and the manufacture of sulphuric acid. He states that the work of erecting the acid chambers is being urged to completion; that large sums of money have been spent in the direction of this plant; but, never-

theless, the whole matter is but a huge experiment, as it is yet uncertain whether it is a technical or commercial possibility, and in addition to this the ultimate disposition and consumption of such great quantities of sulphuric acid is a problem yet unsolved.

Affiant further states that from interviews with some of the superintendents of the works and employees of the Tennessee Copper Company, that if a temporary injunction were granted in this case it would so disrupt and disorganize the entire operations as to make it a serious problem for many years to start work again and probably fatally injure the company financially, and that not alone would it cause hardship and suffering to the hundreds of employees now in the employ of the Tennessee Copper Company, but it would also cause starvation to those who were dependent upon the community around the copper companies for a market for their goods and products.

MARTIN H. VOGEL.

Subscribed to and sworn to before me this 1st day of October, 1906.

FRED. WHITE,
Notary Public (74),
New York City.

EXHIBIT A TO AFFIDAVIT OF MARTIN VOGEL.

TO THE CITIZENS OF NORTH GEORGIA!

The State of Georgia has filed suit in the Supreme Court of the United States, seeking to force the Tennessee and Ducktown Copper Companies to precipitate or otherwise convert the poisonous gases generated by them, and thereby prevent further

destruction of crops, timber, orchards and gardens in Fannin, Murray, Gilmer, Union and Towns counties.

At the hearing in April last numerous experts were produced to prove that the high chimney, then hardly completed, would completely remedy any danger of damage by the sulphur fumes, all damage, however, being denied by copper companies.

The Court held up its decision until its October term of this year, and the parties to the suit were directed to furnish additional testimony before the first Monday in October. *All affidavits, however, must be in the hands of the State's Attorneys by Sept. 18th.*

Counsel for the State are informed that great injury has occurred during the present summer; that much timber has been destroyed, crops killed, gardens and orchards ruined, and often this destruction would be wrought in a single night.

By reason of the large territory affected by these fumes, it will be impossible for the Attorney General or the Special Counsel to visit each locality in person and secure affidavits telling of the various injuries. *It is, however, of utmost importance that the State be furnished every available affidavit,* and a number of Notaries, Justices of the Peace and county officials have tendered their aid in the interest of the public and citizens of their community, and will take affidavits of all citizens who will come before them. Among those so tendering their services are: W. H. Gudger, Clerk of Court, Ellijay; T. H. Tabor, Ordinary, Ellijay; Thos. A. Brown, Blue Ridge; Judge J. R. Chastain, Blue Ridge; Fred Forister, Hot House; Senator Geo. W. Phillips, Pierceville, Ga.; A. H. Burtz, Ellijay; W. T. Pickett, Ellijay; J. W. Whitener, Cherry Log; J. S. Smith, Justice of the Peace, Santa Luca, Ga.; W. E. Candler, Blairsville; Postmaster Smith, Mineral Bluff, Ga.

There is hardly a citizen in the counties affected, certainly

none living adjacent to the Ducktown basin who has not suffered damage, or does not know of the facts which the State desires to establish. IF THESE CITIZENS WILL FURNISH THE TESTIMONY AS TO SAME, STATE'S COUNSEL FIRMLY BELIEVES AN EARLY RELIEF MAY CONFIDENTLY BE HOPED FOR. THIS CANNOT BE DONE WITHOUT THE TESTIMONY. The State is acting for the benefit of her citizens, and she can accomplish nothing unless the citizens in whose interest the State proceeds will aid in the premises. HAVE YOU GIVEN YOUR TESTIMONY? If not, please GO AT ONCE to one of the above named gentlemen and let your testimony be taken.

Yours truly,

LIGON JOHNSON,
Special Counsel.

P. S.—Mr.....will be in.....

on.....see him them.

AFFIDAVIT OF W. R. EARLY.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1906.

STATE OF GEORGIA, *by Its Attorney General*,
JOHN C. HART, *Plaintiff*,

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants*.

No. 13.

STATE OF GEORGIA, }
Fannin County. }

Personally appeared before me the undersigned authority, a Justice of the Peace in and for Fannin County, Georgia, W. R. Early, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Fannin County, Georgia, and is a land owner and farmer in said county, owning about 200 acres of land; that he has resided in said county about 46 years; that recently he was approached by one man who said he represented the State of Georgia in this case, who requested that he make an affidavit which he had prepared in behalf of the State of Georgia; that in asking him to sign the affidavit he stated that it was simply for the purpose of making the copper companies condense their fumes, and that they (the State of Georgia) were trying to make them do that, as the copper companies were greatly increasing their business and would destroy all the country and vegetation around; and that if he did not sign it he would never be able to get damages against them if there should be any damage to him. Affiant states that there never has been any damage to his property, or to his crops, and that he is desir-

ous of having the copper companies continue work. He has heard from many of his friends in his neighborhood that they were approached by men representing the plaintiff, who made similar representations, and that some of them stated that they signed affidavits fearing that there would be some damage, and that if there was to be they wouldn't get any damages and that they would never have signed same if they had known it was for shutting down the mines, as they are desirous of having the mines in operation, as it is for the benefit of all the people around.

his
W. R. × EARLY.
mark

Subscribed and sworn to before me on this September 22nd, 1906.

W. J. MATTHEWS,
Justice of the Peace for Fannin County, Ga.

AFFIDAVIT OF W. H. CARVER.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1906.

STATE OF GEORGIA, *by Its Attorney General*,
JOHN C. HART, *Plaintiff*,

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF GEORGIA, }
Fannin County. }

Personally appeared before me the undersigned authority, a Justice of the Peace in and for said County, W. H. Carver, who being first duly sworn herein, on his oath did say: That he is a citizen and resident, land owner and farmer of Fannin County, Georgia; and also runs a saw mill; that he is fully acquainted with all the woodland in the neighborhood, and that he knows all the good merchantable timber has already been cut off in the neighborhood, and that there is no more in the vicinity with exception of a few trees here and there that it is not worth lumbering for. That he at one time had some trees that were damaged by the company when he lived in Tennessee, and started suit against defendants, but he afterwards found that he could get as much for the timber in its condition as he could for any other timber he did not think damaged; and as a man acquainted with forest lands he does not think that the sulphur fumes do permanent injury to timber. Affiant has heard from some persons who signed the affidavit presented to them by the State of Georgia that they would not have signed same if they had

known that it was for the purpose of shutting down the copper operations. That he is in no way interested or employed by the copper companies and makes this affidavit because he thinks it will be very disastrous for the country around and for the citizens to have the mines shut down.

Affiant has heard many of the citizens of Northern Georgia state that they would never have signed affidavits for the State of Georgia if they thought that it was for the purpose of shutting down the mines, but they did it because they understood or were told that if they did not sign it the companies were going to increase their business and do great damages all around, and if they did not sign they could never get damages.

W. H. CARVER.

Subscribed and sworn to before me on this September 22d, 1906.

W. J. MATTHEWS,
Justice of the Peace for Fannin County, Ga.

AFFIDAVIT OF G. C. STEPP.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General*, JOHN C. HART, *Plaintiff*,

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER & IRON COMPANY, LTD., *Defendants*.

No. 13.

STATE OF GEORGIA, *Fannin County*.

Personally appeared before me the undersigned authority, a Justice of the Peace in and for said County, G. C. Stepp, who, being first duly sworn herein, on his oath did say: That he is a citizen, land owner and farmer of Fannin County, Georgia. He states that he signed a general affidavit or petition at Blue Ridge, Georgia, on behalf of the plaintiff, State of Georgia, in this case. He says that at the time of signing said affidavit the same was not read to him, but that he understood he was requested to sign said affidavit in order to get the copper companies to condense the smoke, and did not sign said affidavit with the purpose of having the copper companies shut down, for he is in favor of having the copper companies operate and believes that it is best for all of his citizens of Fannin County that said copper companies continue to operate. He attended a mass meeting at Blue Ridge, Georgia, at which said affidavit was presented and signed, and he states that the signers of said affidavit signed it under the same impression as he did. It was that the companies would increase their plant and he would never get any damages

unless he signed said affidavit. It was stated also that the smoke would injure the whole country and he had better sign said affidavit if he expected to get any damage.

his
G. C. × STEPP.
mark

Witness:
EDWARD HACKER.

Subscribed and sworn to before me on this September 22d, 1906.
W. J. MATHEWS,
Justice of the Peace for Fannin County.

AFFIDAVIT OF CALVIN L. GODFREY.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General*, JOHN C. HART, *Plaintiff*,
vs.
TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER & IRON CO. (LIMITED), *Defendants*. } No. 13.

STATE OF GEORGIA, *Fannin County*.

Personally appeared before me the undersigned authority, a Justice of the Peace in and for Fannin County, Georgia, Calvin L. Godfrey, who, being first duly sworn herein, on his oath did say: That he is a citizen and resident of Gilmer County, Geor-

gia, and is also a farmer and land owner in said County, residing about twenty miles from the copper operations at Ducktown. He states that there is no damage by smoke to vegetation or timber to his knowledge in his locality and further that he certainly considers it to the best interests of all the citizens of his neighborhood that said copper companies be permitted to continue operations, and that it is the wish of the citizens of Northern Georgia, where he lives, that said copper operations continue work. That he has heard that a few people have found some dying trees on their land, some of them he heard say thought that it was from the sulphur fumes of copper works, and some of them thought it was due to the fact that the best lumber had been cut down for saw mill purposes and the branches of those cut down falling on ground and decaying caused worms, which naturally spread among the standing timber.

CALVIN L. GODFREY.

Subscribed and sworn to before me
on this Sept. 22, 1906.
W. J. MATHEWS,
Justice of the Peace, Fannin County, Ga.

AFFIDAVIT OF GEORGE LANNING.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General*, JOHN C. HART, *Plaintiff*,

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER & IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF GEORGIA, *Fannin County.*

Personally appeared before me the undersigned authority, a Justice of the Peace in and for Fannin County, Georgia, George Lanning, who, being first duly sworn herein, on his oath did say: That he is a citizen and resident of Fannin County, Georgia, and is a land owner in said county; and also owns a farm in said county; that a short time ago an attorney by the name of Brown requested affiant to sign a paper which he stated to him was simply an affidavit stating that it was for the purpose of having the copper companies condense their smoke and was not for the purpose of shutting the companies down; that he stated to affiant that all the residents and citizens were signing it and told him he could sign it and it would not hurt the copper companies at all, and that he told him it was not necessary for him to read it, and thereupon and with such understanding affiant signed said paper. Since that time he has heard from many of the citizens in the neighborhood that they were sorry that they signed similar affidavits, having signed them under the same impression, and that if they had thought it was to stop the copper companies

they would never have signed them, as they all think it much more beneficial for all concerned to have them continue business.

G. W. A. LANNING.

Subscribed and sworn to before me on this September 21st, 1906.

W. J. MATTHEWS,
Justice of Peace, Fannin County, Ga.

AFFIDAVIT OF R. F. LEDFORD.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER & IRON CO. (LIMITED), *Defendants.*

No. 13.

STATE OF GEORGIA,
Fannin County.

Personally appeared before me, a Justice of the Peace in and for Fannin County, Georgia, R. F. Ledford, who being first duly sworn herein, on his oath did say: That he is a resident and citizen of Gilmer County, Georgia, and resides about sixteen miles from Ducktown, Tenn. Affiant signed an affidavit for the State of Georgia sometime ago in this case with the understanding that it was for the purpose of having the copper companies condense the sulphur smoke but he did not desire to be under-

stood in his affidavit to state that he wanted the copper companies stopped from operating, for he thinks it to the best interests of all citizens that the copper companies should run on. Affiant is a land owner and farmer and owns 270 acres in Gilmer County, Georgia.

R. F. LEDFORD.

Subscribed and sworn to before me on September 22d, 1906.

W. J. MATHEWS,
Justice of Peace for Fannin County, Ga.

AFFIDAVIT OF MESSER, McDOUGAL, KINCAID.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General*, JOHN C. HART, *Plaintiff*,

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER & IRON CO. (LIMITED), *Defendants*.

No. 13.

STATE OF GEORGIA,
Fannin County.

Personally appeared before the undersigned authority, a Justice of the Peace in and for Fannin County, Georgia, J. W. Messer, S. A. McDougal and C. M. Kincaid, who being first duly sworn herein, on their oaths did say that they reside about 15 miles from the copper company plants at Ducktown, Tennessee; that each of affiants are property owners, and own together about 700 acres in Fannin County, Georgia, about 15 miles from

the copper works. Affiants state that they consider it to the best interests of the citizens of Georgia that the copper companies continue operations and they themselves desire said copper companies continue operations, and are not favorable to closing down said copper plants.

J. W. MESSER.
S. A. McDOUGAL.
C. M. KINCAID.

Subscribed and sworn to before me on this September 22d, 1906.

W. J. MATHEWS,
Justice of Peace for Fannin County, Ga.

AFFIDAVIT OF W. N. FOSTER.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General*, JOHN C. HART, *Plaintiff*,

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER & IRON CO. (LIMITED), *Defendants.*

No. 13.

STATE OF GEORGIA, *Fannin County.*

Personally appeared before the undersigned authority, a Justice of the Peace in and for said County, W. N. Foster, who being first duly sworn herein, on his oath did say: That he is a citizen and resident of Fannin County, Georgia, and a land

owner and farmer of said County. Affiant states that he has lived in Fannin County, Georgia, for about 30 years, nine miles from the copper operations, and affiant states that he has never been injured by any smoke or fumes from the copper operations at Ducktown, Tennessee, but that he has been enabled to raise good crops and fruits all the time. Affiant says that he believes it to the best interest of the people that said copper companies be permitted to continue operations.

W. N. FOSTER.

Subscribed and sworn to before me on this September 22d, 1906.

W. J. MATHEWS,
Justice of Peace for Fannin County, Ga.

AFFIDAVIT OF J. W. HIPP.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General*, JOHN C. HART, *Plaintiff*,

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER & IRON CO. (LIMITED) *et al.*, *Defendants.*

No. 13.

STATE OF GEORGIA, *Fannin County.*

Personally appeared before me, the undersigned authority, a Notary Public within and for the State and County aforesaid, J. W. Hipp, who being by me first duly sworn according to law

in relation to the aforesaid cause, upon his oath did say: That he is 56 years old and resides at Blue Ridge, Fannin County, Georgia, and owns real estate in Blue Ridge in said County. That about ten days ago affiant signed a paper for the State of Georgia, but affiant did not read, or hear said paper read, but he is now informed that the same was an affidavit for the closing down of the mines. Affiant says that at the time he signed and executed the said paper he did so with the understanding from the Attorneys representing the plaintiff that said affidavit was not to close down mining operations at Ducktown, Tennessee, but was for the purpose of forcing the mining companies to condense the smoke so as to do no perceptible injury to adjacent lands. And had affiant known the intent and purpose of said paper, which he is now informed was an affidavit for the closing down of said mines, he would never have signed the same for said pursposes, as he does not now, and never has been, in favor of closing down said mining operations, but on the other hand believes that the best interests will be subserved by continuing operations and allowing the companies to construct their acid plant and improvements to relieve the situation.

J. W. Hipp.

Sworn to and subscribed before me
this September 25th, 1906.

J. F. Holden,
Notary Public,
Fannin County, Ga.

AFFIDAVIT OF W. G. OWENBY.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General* JOHN C. HART, *Plaintiff*,

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER & IRON CO. (LIMITED) *et al.*, *Defendants.*

No. 13.

STATE OF GEORGIA, *Fannin County.*

Personally appeared before me, the undersigned authority, within and for the State and County aforesaid, W. G. Owenby, who is to me well known, and who, being by me first duly sworn according to law in relation to the above-entitled cause, on his oath did say: That he is 39 years of age, resides in Blue Ridge, Fannin County, Georgia, where he has resided for a number of years; that about ten days ago, at the instance of the Attorneys for the Plaintiff, affiant signed and executed the General Affidavit used by Plaintiff in this suit; that he understood, at the time he signed and executed said affidavit, that it was not for the purpose of closing down the mines and works of the Defendants at Ducktown, Tennessee, and that such was not the intent, desire or purpose of this suit, but, on the other hand, affiant understood that said affidavit was for the purpose of forcing the Defendants to condense the smoke so as to eliminate the injury to the adjacent lands, and this was the purpose for which affiant signed said affidavit. He further says that it is not now and never was his intent or desire that the copper operations at Ducktown be closed

down, and he does not desire now to be understood in his aforesaid affidavit as sanctioning the closing down of said mines, but he says that there has been some damage done to the adjacent lands, and he desires that the smoke and fumes in question be so reduced, if possible, as to eliminate the injury complained of, and relieve the situation along this line, as the working of the mines is a great benefit to the surrounding country.

W. G. OWENBY.

Sworn to and subscribed before me this September 24th, 1906.

J. F. HOLDEN,
Notary Public,
Fannin County, Ga.

(Notary's seal.)

AFFIDAVIT OF S. C. DAVENPORT.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General*, JOHN C. HART, *Plaintiff*,

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER & IRON COMPANY (LIMITED), *Defendants*.

No. 13.

STATE OF TENNESSEE, *Polk County*.

Personally appeared before me, W. A. Guinn, a Notary Public within and for the State and County aforesaid, S. C. Davenport, who made oath in due form of law and says: That

he is a resident and citizen of Fannin County, Georgia, where he owns a farm and has lived in said County for about fifty-one years. That some month or more ago, he gave an affidavit in this cause on behalf of the State of Georgia, and affiant says that he signed said affidavit without reading the same, but that it was his understanding at the time he gave the same that said affidavit was for the purpose of making the companies condense the smoke and not for the purpose of closing them down. Affiant further says that he did not at the time he signed said affidavit want the mines closed down, and he does not now want them closed down; and he makes this affidavit that his true intention may be made known.

S. C. DAVENPORT.

Sworn to and subscribed before me this September 22d, 1906.

W. A. GUINN,
(Notary's seal.) Notary Public.

AFFIDAVIT OF H. K. BROWN.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General*, JOHN C. HART, *Plaintiff*,

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER & IRON COMPANY (LIMITED), *Defendants.*

No. 13.

STATE OF TENNESSEE, *Polk County.*

Personally appeared before me, W. A. Guinn, a Notary Public within and for the State and County aforesaid, H. K. Brown, who is to me well known, and who made oath in due form of law and says: That he is a resident and citizen of Fannin County, Georgia, where he has lived for many years past. That he owns two hundred and sixty acres of land whereon he now lives, and is engaged in farming about seven or eight miles from the copper works at Ducktown, Tennessee. Affiant further says that a short time ago one Thomas A. Brown came to where affiant was at the store of one Vestal, in said County, and tried to get affiant to sign an affidavit that said Brown wanted affiant to sign said affidavit without reading same to affiant, and at the time gave affiant to understand that the intent of this suit was not to close the mines down and said affidavit was not for this purpose, but that it was intended by said affidavit to force the Companies to condense the smoke and not close them down. Affiant did not sign said affidavit because he wanted the mines to continue operations. Affiant further says that he saw Joe

Vestal, George Lanning, and some others sign said affidavit without reading the same, or having the same read to them to affiant's knowledge, but that said Brown left the impression on all parties that if they signed the affidavit it would only be for the purpose of condensing the smoke and not close down mining operations in the Ducktown district.

H. K. BROWN.

Sworn to and subscribed before me this September 22d, 1906.

W. A. GUINN,
(Notary's seal.) Notary Public.

AFFIDAVIT OF EDWARD HACKER.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General,*
JOHN C. HART, *Plaintiff,*
vs.
TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER & IRON COMPANY (LIMITED), *Defendants.*
No. 13.

STATE OF TENNESSEE,
Knox County.

Personally appeared before me the undersigned authority, a Notary Public in and for Knox County, Tennessee, Edward Hacker, who being first duly sworn herein, on his oath did say: That he was employed by the Tennessee Copper Company to go to the Ducktown Mining District to take affidavits of such

persons who were willing to give them on behalf of the defendants herein. Affiant states that he spent four or five days in said district, taking affidavits on behalf of the Tennessee Copper Company, and in that time secured some 130 affidavits of citizens and residents of Polk County, Tennessee, and Fannin County, Georgia, when he was instructed by counsel for defendant Tennessee Copper Company that they did not wish to further encumber the record with additional affidavits. Affiant thereupon stopped taking affidavits. Affiant states that had he devoted more time to this matter he believes he could have secured several hundred additional similar affidavits of citizens and residents of both of said counties, as well as affidavits of citizens of other counties in Northern Georgia.

EDWARD HACKER.

Subscribed and sworn to before me on this September 24th, 1906.

F. G. MCCONNELL,
Notary Public,
Knox County, Tennessee.

AFFIDAVIT OF G. G. HYATT.

IN THE SUPREME COURT OF THE UNITED STATES.

October Term, 1905.

STATE OF GEORGIA, *by Its Attorney General* JOHN C. HART, *Plaintiff*,

vs.

TENNESSEE COPPER COMPANY and DUCKTOWN SULPHUR, COPPER AND IRON COMPANY (LIMITED).

No. 13.

STATE OF TENNESSEE, *Knox County.*

Personally appeared before me, the undersigned, T. G. McConnell, a Notary Public in and for said county, duly authorized to administer oaths, G. G. Hyatt, who being first duly sworn herein, on his oath did say:

That he was in the town of Ellijay, Gilmer County, Georgia, on the 12th day of September, 1906, when the citizens of said county held what was called a smoke meeting. That affiant did not get there in time to see and hear what was said in said mass meeting. That he did not count the people that attended said meeting, but from his best judgment there were some fifteen or twenty people that attended said meeting. Affiant further states that he talked with a goodly number of the business men and people of Ellijay, and that every one whom he talked to were opposed to the suit of the State of Georgia against the copper companies at Ducktown. They claimed that the operation of the copper mines at Ducktown benefited the people of the adjoining counties of the State of Georgia more than it did the people in the State of Tennessee or North Carolina. From what affiant

saw, the only persons who were taking an active interest in the prosecution of the suit against the mining companies at Ducktown were Shippen Brothers.

G. G. HYATT.

Sworn to and subscribed before me this 25th day of September, 1906.

F. G. McCONNELL,
(Notary's seal.) Notary Public.